ENGINEERING NEWS-RECORD

Major General

UGENE REYBOLD

of Engineers, U.S. Army

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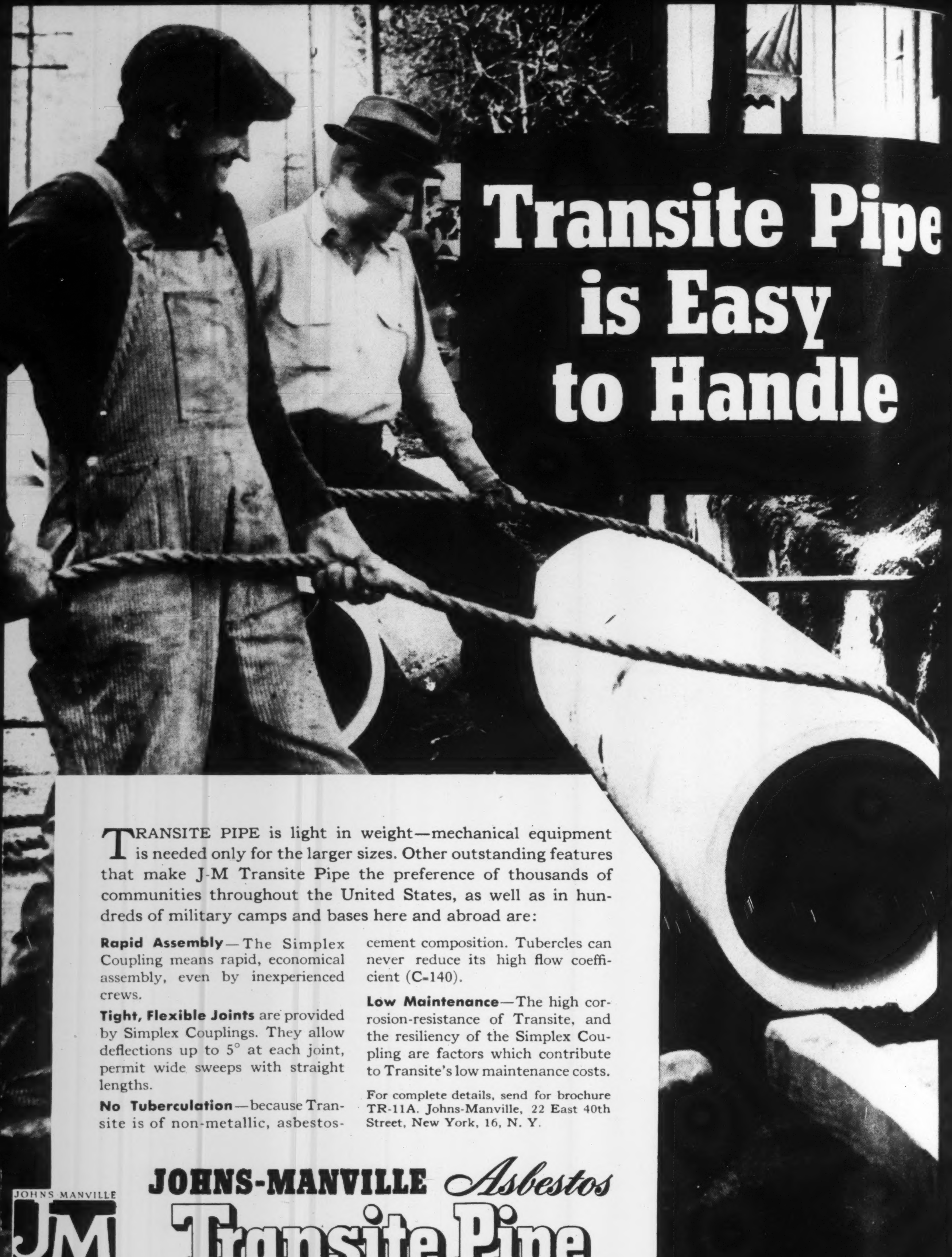

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he Week In Engineering and Construction

GINEERING NEWS-RECORD • AUGUST 5, 1943 • VOLUME 131 • NUMBER 6

ivil engineers to expand ostwar planning activities

.S.C.E. board authorized full-time additions to staff to omote preparation of plans and specifications for post- r projects—Active convention held in Los Angeles

ansion of the staff of the Ameri- ociety of Civil Engineers to include -time director of the society's post- lanning work was approved by the of direction of the society at its g held in Los Angeles July 28-29 nection with the 73rd annual con- n of the society. An appropriation ,000 for this work was authorized. s action was taken on the recom- tion of the society's committee on r construction which was ap- d following the spring meeting of oard (*ENR*, April 22, p. 533, and 24, p. 922).

Local financing favored

e report to the board by the com- e on postwar construction was d with only minor changes. Tak- middle-ground stand on the con- sial point of federal appropriations stwar planning, the program ap- d by the board proposes that fed- unds be advanced for plans and ications on postwar work with the o that this money be returned projects are financed and advance construction stage. Emphasis was on projects of the "immediate" than the long-range class. De- maintenance and projects delayed war were mentioned as well as in- l and residential buildings rather nly public-works projects.

er matters acted on by the board ed a resolution stressing the de- lity of engaging engineers and engi- g firms of experience from so-called e practice for specialized municipal particularly in those municipalities her public units where otherwise de experience of specialists would t and the gathering of a special employees would be for temporary only.

sion was reached by the board to strong recommendations to the Secretary of the Interior that the chief of the Bureau of Reclamation should be a civilian civil engineer. The next meeting of the board was set for Atlanta, Ga., on Oct. 12.

The executive committee approved and endorsed the revised draft of the model registration law to include provision for "engineers-in-training."

Local members predominate

Though nominally the annual summer convention of the society, transportation conditions made it largely a local meeting. Most of the 726 registrants were from Southern California, the remainder being from scattered points on the Pacific Coast. Keynote of the meeting was sounded in the opening session by Julian Hinds, president, Los Angeles Section, who said: "You were invited to this wartime meeting for one purpose—to work."

Ezra B. Whitman, president, reported the society to be in a healthy condition with a membership now nearing 19,000. Technical activities, he said, are slowed by having nearly 25 percent of the membership in the armed forces. Of members in uniform, 96 percent are officers. He emphasized the need for maintaining professional standing.

A stirring address on "Engineer Construction in a Theater of War" by Maj. Gen. Eugene Reybold, Chief of Engineers, U. S. Army, pointed out that nearly the entire globe is now a possible "theater of war." He portrayed the all-important part played by engineers in modern warfare. "This is an engineers war" he said. "Engineering equipment, moving on engineering transportation, bringing up to the front equipment and supplies from industries built by engineers, has turned the tide of war." The preparatory construction program costing $11,000,000,000 has now been 90 percent completed but there is a demand for engineers in the city engineer and city manager class to operate the works built. Citing almost miraculous achievements of engineer troops and seeing inevitable victory, he never-the-less warned that "our major job is ahead."

Surveying and mapping

The term "photogrammetry" was defined by Leon T. Eliel, vice-president, Fairchild Aerial Surveys, as the scientific development of aerial photography that begins where the product ceases to be a picture and becomes an accurate map. By way of citing recent progress in this field, Mr. Eliel said that the American Society of Photogrammetrists, only 9 years old, already has more than 1,000

(Continued on page 2)

Work on Navy facilities for repair and construction nears completion

Practically total completion in a few weeks of a $900,000,000 program of facilities for shipbuilding and repair is expected by the Navy's Bureau of Yards and Docks, which handles construction of all public works and utilities at naval shore establishments. As part of the job of creating the facilities for constructing the greatest fleet in the world, the Bureau has undertaken shipbuilding and repair facilities aggregating $425,000,000—installations just for Naval establishments alone. This program is more than 85 percent complete.

The $425,000,000 represents the cost of piers, dredging, shops, shipways, utilities and other yard facilities. This is exclusive of collateral facilities such as barracks for crews of ships undergoing overhaul, dispensaries, cafeterias, offices, administration buildings and labor board structures, schools, laboratories and security items—all necessary to a shipbuilding and repair facility. It also is exclusive of the $511,000,000 drydock program, which is primarily for the servicing and repair of ships, as announced on April 2 last.

members. Sharply in contrast with early aerial photographs, he said, modern photogrammetry produces maps to any desired scale, with any required degree of accuracy and with contours plotted from known control points.

Alfred Jones, Los Angeles County surveyor and county engineer, described a 5-year county mapping project completed with the aid of numerous agencies within the county, co-operating through a joint committee. The project began with a primary triangulation network. Accuracy standards higher than those required by the U. S. Coast and Geodetic Survey were adopted and much special equipment was developed, such as core drills with which to set markers under street pavements, trailers for city use, a rod with a level bubble for centering invar tape tripods and a theodolite mounting for use on building parapets.

The local sections conference devoted special attention to employer-employee relationships and to junior forum activities. On the latter topic widely different experience was reported. In cities where the younger men have prospect of permanent employment the forum idea prospers: but even where large numbers of younger men are grouped, if their stay is uncertain, less than 3 percent have shown an interest.

Stream debris problems

Problems arising from debris carried down in flood runoff from mountain watersheds were outlined in a paper by Paul Baumann, assistant chief engineer, Los Angeles County Flood Control District, who cited extremely heavy debris deposition in streams of the San Gabriel range. Rainfall is heavy, ranging up to 25.83 in. in 24 hr. (Jan. 22, 1943, on Big Santa Anita) and debris production from small water sheds can be as great as 100,000 cu.yd. per square mile (La Crescenta area after fire had denuded the watershed). Ten dams that catch debris and thereby keep it off improved property, cost an average of $620 per acre-ft. of storage. With heavy rates of deposition, this protection would be lost, as basins fill, unless debris is removed. Where suitable sluicing facilities are available, much of the debris can be sluiced out of the basins at a cost of about $16 per acre-ft.

In a paper on water storage capacity of alluvium, Harold Conkling, deputy state engineer of California, pointed out that utilization of ground water supplies has been treated by engineers and by the courts as a mystery. The tendency has been to separate into two compartments the knowledge and the law; one compartment for surface waters and one for ground waters. This should not be done, he said, because the physical laws governing the movement of water are the same for both cases.

Support for camouflage nets

A feature of the structural division meeting was a paper on protective concealment of large industrial plants by the garnished netting method, presented by Stephenson B. Barnes, consulting structural engineer, who pointed out that structural design of the complex systems supporting these networks requires competent designers and is in no wise the function of artists. Wire rope networks with spans of 250 ft. or more are planned with provision for wind loads and wet and dry deadloads. A troublesome "flutter" tendency must be damped out by guys or by timbers that serve as small stiffening trusses.

To avoid telltale sags, he said, the netting is sometimes suspended on a secondary cable system. Wire rope is used in sizes up to 1⅝ in., with strengths of 100,000 to 200,000 lb. per sq.in. Often the safety factor is only two. Fittings that have been specially developed for this service include pole caps, turnbuckles, clevices, plates with fins and a novel combination shackle and thimble called a "shimble."

Stretch and sag in wire rope networks require careful determinations; and connections, especially to buildings, must be analyzed for unbalanced loadings resultant from broken cables. Many complex combinations of cables and supports, such as inclined end poles and vertical backstays or two inclined poles with ties to a concrete deadman require analysis. Wind effects on netting weighing only ⅓ lb. per sq.ft. may cause vertical loads of 75 to 100 tons on corner poles.

Discussion of Mr. Barnes' paper by Richard W. Ware, structural engineer, dealt with "floating gussets," improved design for anchors, shackles and other fittings as well as a method of determining necessary thicknesses of bearing plates for pole tops.

Concrete dam deterioration

In additions to descriptions of concrete deterioration and methods of repair used on the Gouin Dam in Canada and at the Buck plant of the Appalachian Power Co., studies of expansive deterioration in numerous concrete dams were reported in a paper by R. F. Blanks and H. S. Meissner, Denver, read by R. E. Davis. Citing examples in da widely dispersed, this paper describ the "pattern-" and map-crackin symptoms but said that positive iden fication of the "alkali-aggregate diseas usually requires laboratory study a tests of sample cores.

Slow in its progress (sometimes taki 18 years to develop) and with larg superficial manifestations, the disease considered of minor structural imp tance. However, there are aesthetic a psychological aspects and the effect embedded machinery, in disaligni shafts and breaking guide vanes m cause plant shutdowns and extensive setting of generating machinery. "P dence dictates," the paper conclud "that aggregates of known or suspect activity (in reaction with Portland ment) be avoided but where this is feasible, that only low-alkali cements used."

Professor Davis, in discussion, an ysed some of the factors contributi to internal deterioration. Much progr has been made, he said, and we can n avoid many of the risks that were known earlier, yet there is much to learned and many aspects of the ca of this trouble are still not underst

An unusually difficult problem in crete deterioration was cited by W. Chadwick, Los Angeles, in the case Florence Lake Dam, a thin, multi arch at El. 7,000 ft which season undergoes more than 200 freezing thawing cycles. Southern exposure sun gives a majority of these cycle temperature range that exceeds 80 F. in the surface concrete while under side of the same thin slab mains at almost the same temperat Years of experiment with reme measures, including tests of 61 mater has developed no ideal remedial m ures. Shotcrete, although unsatisfac because of cracks, is now the prefe treatment and is coated with linseed and a light reflecting paint to re temperature ranges.

Foundations in clay

The analysis of foundations for quay walls constructed on deep, very clay or bay mud, was described by liam W. Moore, Dames & Moore, Angeles. One foundation was impro by displacing the soft mud and fil with sand in one operation, using discharge line of a hydraulic dred In the other case, the structure founded on a rock fill placed in excavation made by a clam-shell dred

(*Continued on page 9*)

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ig construction firms o into shipbuilding

A. Turner, president, Turner Conction Co., New York, and Chas. B. ncer, vice president of Spencer, ite & Prentis, New York, announced Aug. 3 that the two firms had entered a contract with the Alabama Dry k and Shipbuilding Co. of Mobile, under which they will participate he expanded tanker building pron of the Alabama company. By drawon the large reservoir of construction erience built up by the Turner comy on its work on Pacific bases and Spencer, White & Prentis on drydock ding, it is hoped that the rate of duction of tankers from the Alabama ls can be doubled. Some of Turner's men are being flown in from Hawaii ake part in the new work.

he present contract between the two struction firms and the Alabama comy covers about 80 steel tankers for Maritime Commission. These ships 500 ft. long, 18,000 tons displacement have a speed of 18 knots. Their will be in excess of $200,000,000.

taking on the added work for the itime Commission the Alabama comy is segregating its repair work from construction work and is concenng on tankers in its main yard. That , which has been building ships since ld War I. has been expanded to ude four side launching ways and t end launching ways. It now ems 22,000 men and women.

red B. Spencer, president of Spencer Ross, Inc., Detroit, a subsidiary of ncer, White & Prentis, has been ed a vice president of the Alabama Dock and Shipbuilding Co. for duraof the contract. He has been in charge he large drydock construction pron of the parent organization. Ultily, it is expected that about 30 key from the two construction firms will ngaged in the shipbuilding work.

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anada gives money aid engineering students

continuation of its policy inaugd last winter, the government of da is giving financial aid to needy nts of science and engineering at dian universities. Students must be r than average, must be in need of cial assistance, and must sign an ement to make their services availto the country, either in the armed s or in industry, upon graduation. s up to a maximum of three hundred rs will be made for one year's univerwork.

e greatest need at present in Canada r graduates in physics and mathematics, mechanical, electrical, chemical and civil engineering.

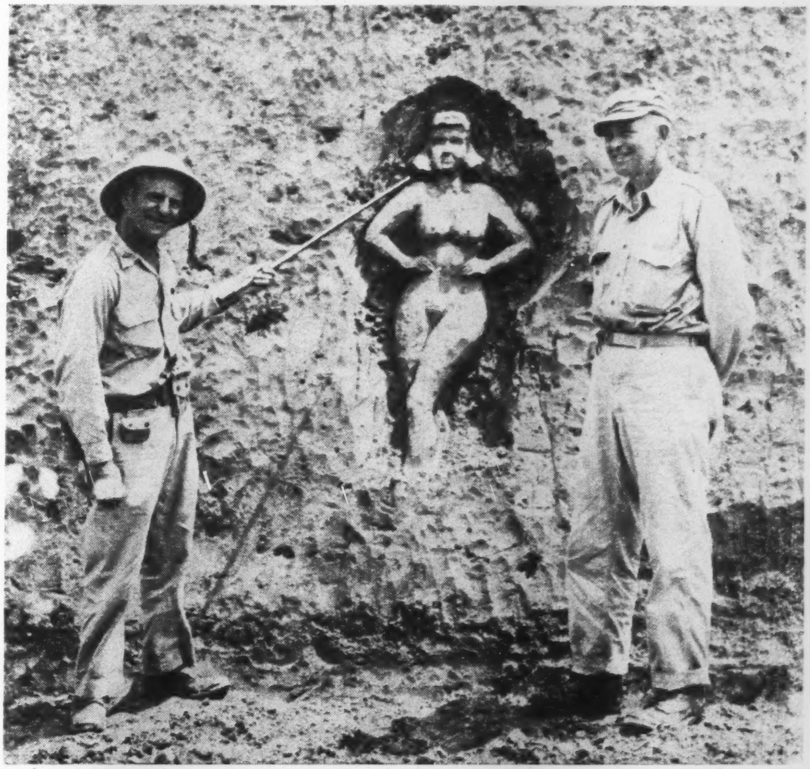
All Canadian universities are carrying on their normal courses of study for undergraduate work and the policy of not accelerating courses is still being followed. An innovation in the university session starting next September will be the operation of the Canadian Army University Course No. 2, in which 1,270 students will be enrolled, following the successful completion of the first special Army course at the University of Toronto last June, attended by 150 students. These young men are enlisted in the Canadian Army, have their uniforms, books, board, tuition and medical and dental care provided, in addition to receiving regular army pay. They are subject to military discipline, and take a special course approximately equivalent to a first-year course in engineering.

The second course is to be given at eleven Canadian universities, the total number of students being divided among them. Upon completion of their course, students are assigned to special duties in the Canadian Army.

Robert Spurr Weston, sanitary engineer, dies

Robert Spurr Weston, consulting engineer, Boston, died July 29, age 74.

A graduate of Amherst in 1891, Mr. Weston was one of the few surviving engineers who had a part in the early scientific studies of mechanical filters for water purification. He was well known for his engineering work in the water supply, stream pollution, sewerage and industrial waste treatment fields. His early work was in the famous Lawrence Experiment Station in Massachusetts. Later, 1896-97 he was with George W. Fuller at the Louisville (Ky.) Filtration Experiment Station. The following year he entered private practice as a consulting sanitary engineer at Boston. One of his early engagements was as resident expert for experiments conducted by the Sewerage and Water Board of New Orleans. In 1916 Mr. Weston became associated with George A. Sampson under the name of Weston and Sampson, which continued until his death.



Acme photo

Army engineers go in for art in their spare moments

Although building a highway across New Guinea and forced to cope with some of the world's most difficult terrain as they built their road through jungles, and swamps and over mountains in this distant field of operations, American Army engineers have never lost their sense of humor. Taking time out from his work, one of the Yanks carved out of a soft clay bank this bit of inspiration for his fellow workers. Inspecting the work of art Col. H. G. Lauterbach, Commander of a U. S. Engineer's Unit, and Brig. Gen. Jens A. Doe, right, who commands an American unit "somewhere in New Guinea."

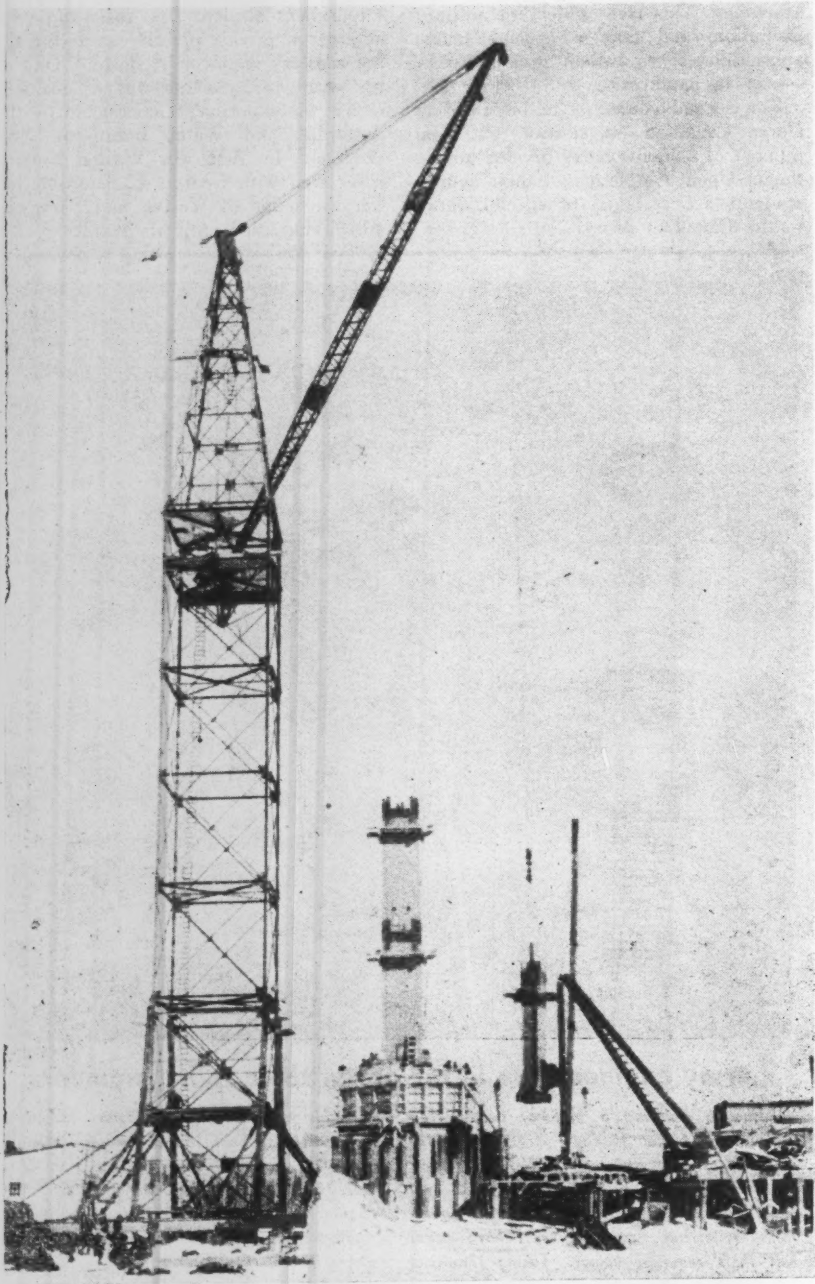
Peace River Bridge builders win hard race

Raymond Archibald

Principal Structural Engineer, Public Roads Administration

The race to complete the two main piers for the suspension bridge being built across the Peace River on the Alaska Highway before the ice "went out" was won this past spring. As a result the two foundations were complete and the steel towers about the piers were in place April 9, six days before the ice started to flow.

Current reports indicate that the concrete deck is being cured and the bridge will be opened to traffic in a few days.



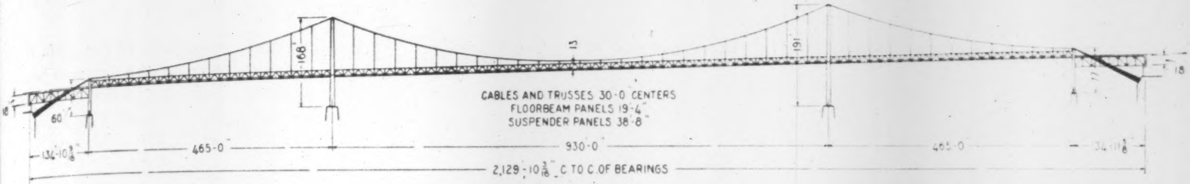
Erection of the two river towers for
bridge was by the erection tower
left, which could be skidded about on
ice with a minimum amount of eff

The bridge is being built across
river near Tavlor Flats, British Colu
bia, and about 37 miles north of Da
son Creek, which is the rail head a
southern terminus of the Alaska Hi
way. Ice on the river at the site atta
a thickness of 4 ft. and breaks up
pieces as large as 700 by 2,000
The stream was bridged last year
a temporary timber trestle, but it
realized then that this type of cross
might have to be replaced three or f
times a year. This condition, plus
fact that all supplies and equipm
to be used north of Dawson Creek
to cross the river at this point, nece
tated a rush job on a permanent bri

Due to the ice conditions and
deep foundations necessary a single s
across the main channel was conside
best; falsework was out of the quest
A suspension bridge with a 930-ft. m
channel and 465-ft. loaded back
spans was selected as best suited
the erection conditions. A single 13
deck truss span is used at each
between the cable bents and the anc
ages, making the overall length of br
2,130 ft. A 24-ft. roadway is provi

Construction of the foundations
started early in December and
carried on throughout the severe
ter weather. Excavation for the m
piers was carried about 50 ft. be
water level into a shale formation.
sheetpiling was used to build the c
dams and the concrete was place
the dry at temperatures as low a
deg. below zero. Each main pier con
about 4,000 cu. yd. of concrete.
was carried on simultaneously on
sides of the river with two complete
fits.

All operations in erecting the
towers were from the ice. This meant
the towers had to be completed
the erection equipment dismantled
early April. Erection was by a to
formerly used on a barge, rigged u
operate on skids on the ice.
tower could reach to a height of
ft., or to the top of the highest br



To keep the number of river piers to a minimum and to eliminate the need for falsework in the main channel, a suspension bridge of type above was selected to carry the Alaska Highway across Peace River.

tower, which is 196 ft. above the pier. The erection tower was guyed back, and, as it could not swing a load, it was "spotted" at the desired point by being skidded on the ice.

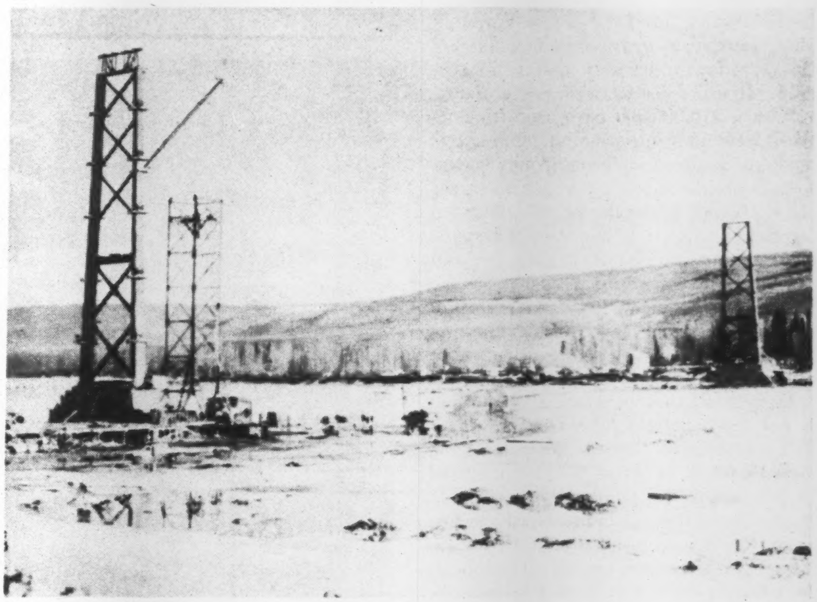
After completing the south tower in three and one-half days, the rig was pulled across the river on the ice to erect the north tower in four days. The latter work was complete April 9. The ice "went out" April 13 to 15, but not until after the erection tower had been dismantled.

Each of the two main suspension cables, which are of the open type with parallel strands, consists of twenty $2\frac{1}{16}$-in. dia. strands spaced 4 in. c. to c. The concreting of the anchorages was coordinated so as to have the cable anchorage steel in place by the time the cables were to be strung. Each anchorage contains about 7,500 cu.yd. of concrete so placed as to form cells that could be filled with gravel. The anchorages were built of large segmented blocks of keyed and interlocked construction.

Design and construction of the bridge are under the direct supervision of the U. S. Public Roads Administration, Thomas H. MacDonald, commissioner. The contract for the construction of the foundations was awarded to Dufferin Paving Co., Toronto, Canada, and that for fabricating and erecting the superstructure, to John A. Roebling's Sons Co., Trenton, N. J.

Cost of the bridge will be about $1,500,000.

A



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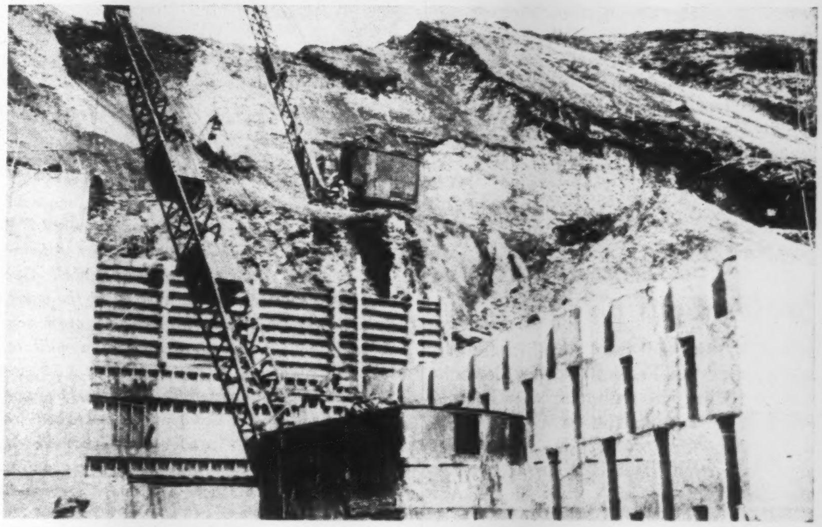

A) The north bridge tower (left) was erected in four days. Work was completed six days ahead of the ice "breakup" or in sufficient time to permit the erection tower to be dismantled and removed before the flow began.

B) Looking upstream during the ice breakup, which indicates the trouble that would have been experienced had the north tower not been completed before the flow started.

C) North anchorage, like that at south end, was built with cells that could be filled with river gravel, an arrangement that gave the anchorage sufficient weight with a minimum of concrete. This picture shows outer walls being built.

Shasta transmission line to be built by U. S. bureau

The Bureau of Reclamation has announced that it will advertise for bids in the near future for construction of the 98-mile, 230-kv. transmission line from Shasta Dam to Oroville, as part of of the Central Valley project in California. The line will serve as an outlet for 150,000-kw. of energy to be available when the Shasta hydro-electric plant begins producing power about March, 1944. It will serve numerous war plants.

With a $10,000,000 carryover from its fiscal 1943 appropriation, the bureau is ready to go ahead so far as money is concerned, despite the fact that the Congress cut $1,500,000 out of the $1,900,000 asked for the transmission line in the Department of the Interior Appropriation bill for 1944, leaving only $400,000 in the bill as finally enacted, to cover cost of building the line from the generating plant to the Shasta substation, a distance of about 25 miles.

Despite all this, however, the question is not yet definitely settled as to who is going to own the line to Oroville. Sen. Carl Hayden (of Arizona) has promised to ask again for approval of the additional $1,500,000 needed to build the line from the Shasta substation to Oroville. The issue is mainly one of principle as to whether or not it comes within the jurisdiction of the Bureau of Reclamation to construct and operate high tension lines. It is expected that the new bill will be so worded that the principle of such public enterprise will stand or fall with the vote on the appropriation.

The Central Valley Project had been given over-all approval by Congress in 1942, and the Bureau of Reclamation in proceeding with construction of the high-tension line is taking the stand that the line is included in the over-all approval.

The Bureau has announced that all equipment for the line has been purchased, that much of it is already on the ground; and that right of way has been procured for a considerable distance.

The bureau is negotiating with the Pacific Gas & Electric Co. for the purchase of Shasta Dam power.

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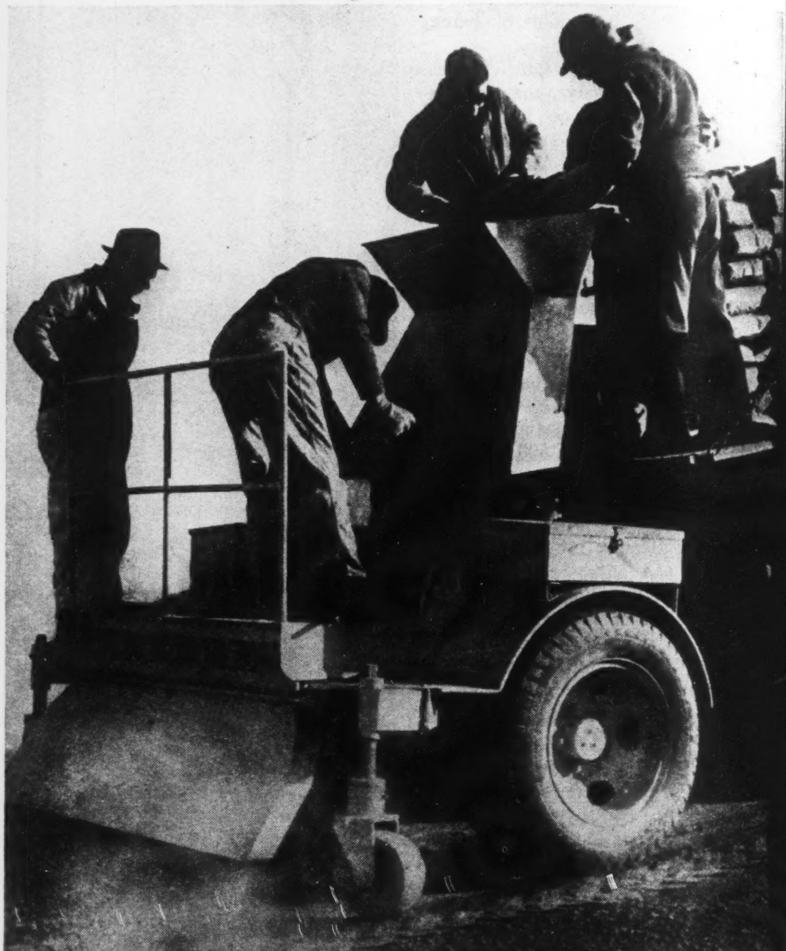
Plan Louisiana-Kentucky natural gas pipeline

It was reported from Washington recently, that the Federal Power Commission is willing to authorize the Tennessee Gas & Transportation Co., to construct and operate a 20-in. natural-gas pipe line from Louisiana to Kentucky, provided the company can obtain the necessary materials and finance the construction and operation. A hearing has been set for Sept. 8 at which the company will be given an opportunity to show its ability to finance the line, to get adequate supplies of gas, and to obtain authorization from the War Production Board for the required priority materials.

The pipeline would extend from Opelousas, La., to a point near Ashland, Ky., which is on the northeastern border of Kentucky, just south of the Ohio River and adjacent to the West Virginia border, or to whatever termination may be designated by the government agency. It would pass Natchez, Miss., Muscle Shoals, Ala., and Nashville, Tenn.

Its principal service would be delivery of gas at its northern terminus to the Hope Natural Gas Co., and other distributors or direct to large users in the district.



Cement spreader designed to be flown to forward area

For use in preparing soil-cement runways or roads in advance areas where equipment must be transported by air, a new and accurate spreader for the cement has been devised.

Developed by the Civil Aeronautics Administration and the Halliburton Oil Well Cementing Co. of Oklahoma, no part of the outfit weighs more than 750 lb., and any of it can be put through a standard door of a military transport plant.

The spreader is adaptable to either bulk or sack cement, and is designed to be towed by truck or tractor. It produces an even distribution over an area 6 ft. wide in any quantity desired between 0.3 and 0.75 cu.ft. per sq.yd. of surface.

Conveyor screws feed cement from a commo hopper to outlet spouts just above the groun Quantity is regulated by a driving mechanis with power obtained from the dual wheels o the spreader arranged so that the rate of tur ing of the screws in proportional to speed.

For bulk cement a fixed container is set on flat bed truck which tows the spreader, and fo use with bag cement a special hamper rest on the rear of the truck and has a special knif on which paper bags can be cut open.

Field tests of the new unit were made o highway work in Oklahoma recently, a total o 6,118 sq.yd. being treated with an average o 49 lb. of cement per sq.yd. Average deliver rate was 29 sacks of cement per minute.

SKETCHES OF OUR ENGINEER GENERALS

The Chief of Engineers, United States Army

MAJ. GEN. EUGENE REYBOLD

The Corps of Engineers is setting enty of precedents in this war. Never fore has any agency handled a ten lion dollar construction program cov- ng the globe, from England to China. d the career of the corps' chief, Major neral Eugene Reybold, sets a few ecedents itself. He is the first Chief Engineers who didn't go to West int. He has been in the Corps of gineers for only sixteen years, hav- transferred from the Coast Artil- y. And his first service with the rps was as a civilian.

General Reybold, 59 years old, went work as a civilian for the U. S. Engi- r Department immediately after his duation from a civil engineering rse at Delaware College. The posi- of a civilian in a military agency is uneasy one, and after five years of Reybold was anxious enough to join army. He took a commision in 1908 a second lieutenant in the Coast Artil- y. He had already had some contact h that branch, since there was a st Artillery post at his home town, laware City.

Within a couple of years, however, he nd himself back on construction ignments when he was sent to the ilippines and served as constructing artermaster. He was also aide to the mmanding general in the Philippines, ring that post with Lt. Edwin Wat- , who now, as a major general, is itary aide to President Roosevelt.

During World War I, Reybold headed Department of Enlisted Specialists the Fort Monroe Coast Artillery ool, receiving a Distinguished Service dal for his work. For some years reafter he was on training assign- nts, plus several stretches as con- cting quartermaster.

n 1926, while attending the Command General Staff School and the Army r College, Reybold transferred to Corps of Engineers. At that time held the rank of major. He was as- ed to the Buffalo engineer office, as stant district engineer and later district engineer. There he first swung into what was to become his technical speciality—river control. In addition to work on Lakes Erie and Huron, Reybold had charge of the Niagara and St. Lawrence river projects and was a member of the National Control Board for Niagara Falls. In 1932, he was promoted to lieutenant colonel and attached to the Rivers and Harbor Board.

Maj. Gen. Eugene Reybold

After a two-year tour in Wilmington, Reybold was shifted to the Memphis office as district engineer. It was there that he first came into the public eye with his handling of the 1937 flood. Early in the flood, while the crest was still at Cincinnati and while Washington was issuing soothing statements, Reybold made headlines by predicting a superflood and insisting on the evacuation of women and children from Cairo. For weeks, Reybold personally followed the crest down the river. All records for the Memphis district were surpassed in the 1937 flood, and Cairo came within a few inches of being inundated. But the crest went through without disaster.

Then Reybold was promoted to colonel and was made a division engineer in the southwestern division, where he had charge of development of the comprehensive flood control plans for the Arkansas and White rivers. This involved laying out projects with a total cost of $430,000,000.

In 1940 Reybold went to Washington to spend a year as Assistant Chief of Staff for G-4 (supply). A year later, in August, 1941, he was appointed Chief of Engineers with the rank of major general. Since then, Reybold has seen war break out, has seen the corps become, for the first time, the central construction agency of the Army with the transfer to it of the Quartermaster construction division, and has been in charge of the largest construction program in history.

The construction industry of the country has not had the close contact with Reybold that it has had with previous engineer chiefs. Necessarily, he has devoted the bulk of his attention to the military and overseas activities of the corps, leaving domestic construction largely to Major General Thomas M. Robbins, Assistant Chief of Engineers.

Gen. Reybold is a big man—about six feet three—can pound a desk and can use forceful language that is noteworthy even in the Corps of Engineers. But he's not ponderous, is light on his feet, and has maintained an athletic figure despite the fact that his only exercise is week-end golf. Most week-ends in the summer, he can be found at Washington's Columbia Country Club. He goes around in the 70s or 80s, usually with Maj. Gen. J. H. Burns of Lend-Lease and Maj. Gen. W. D. Styer, assistant to Lt. Gen. Somervell, Commanding General, Army Service Forces.

Sociable and friendly by nature, a man who calls Congressmen by their first names, the general, though decisive enough, is no martinet. His subordinates get a chance to express their opinions, and he is liked as well as respected in the corps.

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Notes from THE YUKON

By H. W. Richardson

Western Editor, Engineering News-Record

UTAH CONSTRUCTION CO., CAMP 5,
WHITE RIVER, YUKON TERRITORY.
July 4, 1943

I'm spending the Fourth of July in a mild, isolated spot in the western Yukon. The only celebration is an occasional blast in a rock quarry up the road a ways.

Picking up my notes from my last report; I made another trip to Skagway, also by freight, but in the private car of Col. Wilson. Here I finally found out just how high a war correspondent ranks in this army. I'm in the uniform of an officer, wearing no insignia of rank, which confuses the soldiers no end—they don't know whether to salute. In the car that night were two colonels, a major and myself. Two nice beds were made up in the lounge, and two more were made up in two dinky upper berths that had only 18 in. headroom. At bedtime the command was: "Majors and correspondents upstairs, colonels take the beds." That put me in my place I guess. Getting into that berth was an acrobatic stunt. I had to leap off a low stepladder, make a turn and flip sidewise into the berth, keeping the head low.

Access to the oil fields

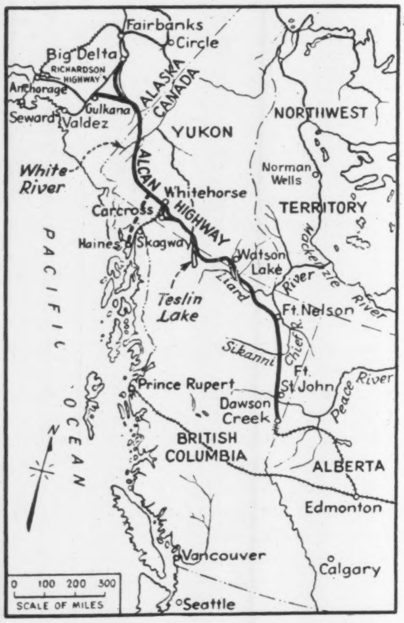
Upon returning from Skagway I made a trip north of Teslin Lake along the new Canol road toward Norman Wells on the west slope of the mountains. Several army outfits are working on this job, some going way up on a winter trail this spring, isolated now except by air. We went to the head end of the first unit only, and at that had to walk in a couple of miles. Profitable day for me, as I lost a wrist watch and a trench coat. An interesting trip, though, and I saw some tough roadbuilding.

Work pushed on road to Haines

Back to Whitehorse and then 108 miles west along the Alcan to the north end of the new road being built as a connection to the seacoast at Haines, below Skagway. Col. "Rusty" Lyons, who commanded the 340th Engineers last year on the Teslin-Watson Lake section of the road, and now "mayor" of Whitehorse as post commander, was my guide. We went to the head end, where engineer troops are trying to break through to meet Foley Bros. working north from Haines. The head end is in tough going—a swamp full of rocks, where you can't get at the swamp for the rocks and can't get at the rocks for the swamp. The boys have learned how to drain the wet country, and are fighting it through.

Supplies delivered by air

The head company had some wild tales to tell. They went in on a winter trail, becoming isolated with the thaw. They were supplied entirely by air, but for some time when the lakes were breaking up neither ski or pontoon planes could land, resulting in a serious shortage of rations and supplies. Finally a desperate effort was made to relieve their plight by dropping stuff from a plane. Here are the results of the first try: First pass over, the plane dropped mail, so the boys rushed out to get their long-delayed letters. Next pass the plane dropped a sack of bridge spikes. The bag broke and the spikes rained down on the mail-reading soldiers like shrapnel. The third pass was to drop an axle and several bearings, tied to a parachute for safety. The parachute ripped apart on the way down—they're still digging in the muskeg for the bearings. On the fourth pass over the camp a side of beef was dropped; the pilot went back and reported he just missed the fuel dump—what he really barely missed was the explosives dump. The next time the plane came up a sack of mail was thrown overboard, but it caught on the tail of the plane, and went all the way back to Whitehorse in that position. So the pilot figured a few weights might help and loaded the sack with small bearings—the weights worked all right, just enough to carry the mail sack through the top of an oil drum into a diesel fuel bath.



Construction activities along the Alcan Highway are centered chiefly in Yukon Territory, building a new road to Norman Wells and rebuilding between Whitehorse and the border of Alaska.

After spending the night at the head-end camp we drove back to Kluane Lake to E. W. Elliott's fine camp. The next day H. S. Tolan, PRA area engineer, drove me to Utah Construction Co. camp at Edith Creek, 250 miles west of Whitehorse.

Some reconstruction needed

Next was a trip by truck to Whit River, 20 miles farther north. The roa was a quagmire most of the way, no yet recovered from the spring break u I'll take off my overseas cap to those 6x Studebakers, chains on all 10 wheels, th plow through the mud to haul supplie to Utah's White River camp. We we in a convoy of two trucks, but for fi miles the going was too tough for eve those fine trucks, so a Caterpillar tract took them in tow and pulled 'em throu at the rate of 1 m.p.h.

The White River bridge is out, so crossed on a bosun's chair on a cablewa pulling myself along hand over han Then we got a Caterpillar tractor a LeTourneau scraper and went ba through the river (lower down, where breaks into a dozen channels) after t luggage and supplies. Oil drums, gr and baggage were all dumped into t scraper. Water came up to the seat the tractor, but it splashed on throu

A difficult supply problem

Utah has a tough job in rebuilding miles of road that went out with frost. About 32 miles from White Ri to Beaver Creek, near the Alaska bord are still unpassable, and Utah is worki into this bad stretch to open it up soon as possible. E. W. Elliott Co. driving a new temporary bridge acr the White, but until it is completed. U is up against a serious supply probl on the section beyond.

Travel by pack horse

I was wondering how to get throu to Fairbanks without going way back Whitehouse and flying through, but editorial good luck holds out. I fi there is a pack train of horses go through to Brown Creek—a couple Utah engineers and an Indian packer and I've been invited to join them. We' going to take two days for the tri camping in the open tomorrow night. means 16 hr. in the saddle, and all hope is that my pre-college ranch ridin experience stays with me after 24 years— I'll report later if able.

H.W.

Los Angeles meeting of A.S.C.E. directors

(Continued from page 2)

0. J. Porter, testing engineer, Cali-
nia division of highways, described
successful use of vertical sand drains
stabilizing soft foundations for high-
y fills and embankments. Discussion
Mr. Moore stressed the lack of com-
te information as to effectiveness of
method for stabilizing foundations
structures where small deflections are
re serious than would be the case for
hway embankment foundations. The
nomic use of sand drains hastens the
solidation of the soil, he said, but
not shorten into a few weeks the con-
idation which might otherwise take
ndreds of years.

R. M. Gillis, construction engineer.
lifornia division of highways pointed
that satisfactory operation of the
d drains necessitates rigid control
ring the placing and filling procedure.
en properly used, sand drains have
ulted in large savings, he said, over
er construction methods.

Col. James H. Stratton, chief. engi-
ering division, Corps of Engineers.
a paper on the design and construc-
n of military airfields, outlined the
of empirical standards for the de-
n of runway slabs and subgrades.
erring to the extensive use of plate
ring tests, elastic analyses for rigid
bs and the use of a modified appli-
ion of the California bearing ratio
thod for the design of non-rigid
bs. Extensive field tests, using heavy.
eumatic-tired equipment have helped
determine the behavior of pavements
subgrades under field conditions.
cussion brought out the fact that
el loads of some present day planes
olve loads six or eight times as heavy
those imposed on highway slabs.
re detailed studies are necessary to
ure economical design and construc-
methods for the support of 60.000
0.000-lb. wheel loads.

iscussion brought out that vibrations
warm-up aprons cause specially
ere stresses. With the large wheel
ds now in use, the effect of the loads
end 5 to 6 ft. below the slabs: per-
sible deflections of the pavements
uld vary with the size of the wheels.

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in brigadier generalships

our colonels in the Army engineers
nominated by the President
ntly to the temporary rank of briga-
general. They are: William E. R.
ll, Crossett, Ark.; Dabney O. Elliott.
anee, Tenn.; Frank A. Heileman.
andria, Va.; and John C. Arrow-
h, Kansas City, Mo.

John Watson Alvord dies, pioneer Chicago engineer

John Watson Alvord, 82, pioneer Chicago engineer and senior member in the engineering firm of Alvord, Burdick & Howson of Chicago died at Douglas, Mich., July 31. He was one of the last of the city engineers who designed the public improvements for the large suburban areas which now constitute a substantial part of Chicago, including Lake View on the north, the old town of Cicero on the west, and Hyde Park upon the south.

Following the annexation of these areas to Chicago in the late 80's, Mr. Alvord organized and conducted the surveys for the World's Columbian Exposition under the late Daniel H. Burnham, director of works, which coordinated and located the great number of building operations that made the famous "White City." He served throughout this undertaking. In 1894, he entered private practice as a consulting engineer with headquarters at Chicago and in cooperation with partners he has served upwards of 300 municipalities, widely scattered throughout the United States, in matters particularly relating to public water supply and sewerage, including treatment plants for water and sewage in which he was one of the pioneers. He was largely concerned with the finances of water supply and the valuation of water works properties, and was frequently employed as a member of appraisal boards in matters of valuation.

Mr. Alvord served Chicago as a member of the Merriam Commission in 1910; member of the Flood Commission for Dayton, Ohio, which outlined the works for the protection of that city after the flood of 1913; member of the Citizens Terminal Plan Commission for Chicago in 1914; member of the State Board of Natural Resources and Conservation from 1918 until recently. During the first World War, he was Supervising Engineer at Camp Grant, Ill., and through cooperation with his partners engineered several other cantonments. He was also chief engineer of the U. S. Housing Corporation from 1917 to 1919.

Mr. Alvord was past president of the American Water Works Association; honorary member, American Society of Civil Engineers; past president and honorary member, Western Society of Engineers; member, American Institute of Consulting Engineers; member, Institution of Civil Engineers, Great Britain;

In 1916, he founded and endowed the Washington Award for pre-eminent services in promoting the public welfare, administered by the Western Society of Engineers, which is conferred upon an especially worthy engineer annually on Washington's birthday.

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Civil engineer heads firm taken over by government

George W. Burpee, a partner in the consulting engineering firm of Coverdale & Colpitts, New York, was elected president of its General Aniline and Film Corp. on July 28. Formerly controlled by the German dye interests, 97 percent of the stock now is vested in the U. S. Alien Property Custodian. William H. Coverdale, senior partner in the firm, also was elected a director of the corporation.

Mr. Burpee is a native of Sheffield, N. B., Canada, and a graduate of Bowdoin College in 1904 and Massachusetts Institute of Technology in 1906. His early engineering work was in railroad construction in New England, the South and West. From 1907 to 1921 he was with Westinghouse, Church, Kerr & Co. and Dwight P. Robinson & Co. on power plant construction and railroad valuation. In 1921 he joined the staff of Coverdale and Colpetts, becoming a partner in 1924. He is a director of the American Society of Civil Engineers.

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British Columbia will build Alaska road link

The province of British Columbia is prepared to build a road at once to connect the Pacific highway with the Alaska Highway at Watson Lake, Premier John Hart told a joint conference of business leaders from Washington and Oregon, and the Vancouver Board of Trade recently.

The province will go ahead with the construction between Fort George, end of the present Pacific Highway extension into British Columbia, and Watson Lake, which is on the Alaska Highway, even if the United States Army or the Dominion of Canada turn the project down, Premier Hart said.

Some highway construction continues and more is planned for the future

Highway projects essential to the war are still going forward and road work has a leading part in postwar plans.

A considerable amount of road work in different parts of the United States and Canada is being completed, and many more projects are in the stage of very definite planning for the postwar period. Following is a summary of some of the leading projects in both classes:

New Pennsylvania highway

State route No. 930 of the Pennsylvania highway system has been relocated along the base of the cliff between Aliquippa and Monaca below Pittsburgh. This puts the new road within 12 ft. of the Pittsburgh & Lake Erie R.R. tracks edging the Ohio River. The old high-level road was subject to slides and only one-way traffic had been permitted during the past two years. The new 3.3.-mile stretch has three lanes of 9-in. unreinforced concrete pavement, 33-ft. wide with 10-ft. shoulders. The new project gives high speed, modern alignment and modern grades; it is being built under preference ratings permitting little use of metal. Cross drains are of reinforced concrete. They discharge into wood flumes which carry the water down the long side slopes. Grades on the project are very flat, whereas those on the old ledge road were rolling and in some cases steep.

The project makes available a modern highway on each side of the Ohio River from the Beaver River valley to Pittsburgh, thus relieving pressure on the Ohio River Boulevard across the river. It also provides better access to war plants. The new roadway serves the Jones & Laughlin steel plant extending for several miles along the Ohio River at Aliquippa, and a number of other plants producing war materials at Monaca.

Paving will be completed soon and construction will be fully completed in a few months. The contractor is S. J. Groves & Sons Co. of Minneapolis, Minn., working from their Ridgefield, N. J., headquarters. The contract is for $1,172,714.

The Philadelphia program

Ten million dollars for the elimination of traffic bottlenecks and the building of access roads of military importance in Philadelphia has been provided for in the 1943-45 state budget.

The Philadelphia program includes postwar and urgent wartime projects. The largest postwar job will be the widening of approaches to the Delaware River bridge.

Considered of immediate importance is a $1,000,000 access road to the municipal airport along the lines of Island Road, Essington and Passyunk Avenues, a second access road to the airport along the line of Island Road in a northeasterly direction from Tinicum Ave. to Buist Ave., and an access road to the Philadelphia Navy Yard and the U. S. Quartermaster's Depot in South Philadelphia.

Road projects in Georgia

Plans are being made for a four-lane $60,000,000 highway from the Tennessee line to Florida and for a similar artery along the Georgia Coast, State Highway Director Ryburn G. Clay disclosed July 19.

War conditions permitting, an effort will be made to complete the projects before the end of the present administration. Financial assistance from the federal government would be necessary.

Clay said that Route 41 running from the Tennessee border near Chattanooga southward through Atlanta, Macon, Valdosta and on to Florida, is the most heavily traveled road in the state and should be rebuilt into a four-lane highway like the present stretch from Atlanta to Marietta. He estimates the cost would be about $150,000 a mile, including plans to relocate and entirely reconstruct most of the highway.

A similar project is considered for the coastal highway, stretching from a few miles north of Savannah to the Florida line and, according to Clay, this is the second most heavily traveled road in the state. Some of this work already has been done, including the building of the two bridges. Engineers are drafting plans for the construction of these superhighways as soon as war conditions permit. Postwar planning is now one of the chief functions of the department.

Truck highway proposed

A committee of the Fairfield, Conn., County Planning Association met recently to develop plans for the construction of a truck highway to connect with the proposed Pelham-Port Chester Parkway in Westchester County, N. Y. Wherever possible the highway will parallel the New Haven railroad tracks. Town officials will discuss their recommendation with the state highway and country planning officials. The general plan is that the highway will be a second link in cross country road building, the first having been the Merritt Highway which is now taking truck traffic as well as passenger car traffic, during the war.

Engineers attending the meeting included Robert Canfield, engineer of th Bridgeport City Planning Commission; Andrew Huntington, Fairfield; Austi Mather, planning consultant of the Fairfield County Planning Association, an Joseph Cone, Greenwich highway commissioner.

Deputy Highway Commissioner A. W Bushell believes one year will be require for the preliminary study of lines for th projected highway. No layout will b developed until complete land studie have been made along the entire rout from the Housatonic River in Stratfor at eastern end through Greenwich at th western end of the route. The Connecticut Legislature authorized the state highway commissioner to prepare a layout fo the highway which will be undertake as a post-war project.

Quebec's Laurier Highway

The Sir Wilfrid Laurier Highwa named for a former famous premier the Dominion, is a 156-mile road extending from the border near Champlai N. Y. to the St. Lawrence River at th Quebec Bridge. It will be Canada largest six-lane roadway, said T. Bouchard, Minister of Roads, in announ ing recently that it is hoped the road wi be completed by the end of this year. Th chief purpose in building it is to spe up traffic between the eastern states a the cities of the Province of Quebec. T Highway will cost about $18,000,000. date, no connecting highway of simil character has been built in New Yo State.

Mr. Bouchard explained that the hig way is as straight as a road can be bu through populated areas. All citi towns, parishes and municipalities by-passed, with the exception of Hyacinthe.

The Sir Wilfrid Laurier Highway not intended for local traffic, which well taken care of otherwise. Access the highway is restricted.

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State workmen's fund covers second injury

Legislation providing for the cr tion of "second injury" funds to ov come unwillingness of employers to hi physically handicapped workers, h been adopted this year by the five state Maine, Michigan, Oklahoma, Rhode land and Washington, so reports t American Public Welfare Associatio As provided in this legislation, e ployers pay the costs of second injuri only, and if second injuries, combin with the original handicap, result permanent disability, the additional co is borne by the state's second-inju fund. Prior to this year only 14 stat had such legislation.

U.S. Army Engineers in Britain

Midnight inspection by the chiefs is a frequent occurrence on American airfield construction in Great Britain where army Engineer troops work round the clock. Here, left to right, in the front row are Brig. Gen. Cecil R. Moore, chief engineer, European Theatre of Operations, Maj. Gen. John C. H. Lee, chief of the Services of Supply, and Col. E. G. Plank, base section commander in the area in which the airfield is located. In the rear are Majors Alvin Moore and H. M. Salley whose job has just had a going over.

Here will be an American airfield in Britain. These officers are examining the proposed location of the runway and dispersal points. At the left is Maj. A. H. Burleigh, civil engineer for the A. A. F. in this area and a former highway engineer in Florida. Maj. F. L. Leimkuehler, recently a St. Louis architect, but now an area engineer for the Corps of Engineers, stands at the right. In the center, directing the show, is Capt. John G. Anderson of the airdrome section of the Chief Engineer's Headquarters.

aj. Gen. John C. H. Lee, chief of S. O. S. in the European Theatre f Operations, is either giving or seeking advice from an Engineer nit truck driver. The General does both on his frequent inspection rips, which he thoroughly enjoys as a former Engineer Corps officer ho has moved up to the top in our wartime army. With him, back o the camera, is Col. E. G. "Eddie" Plank, base section commander.

Congratulations from the big boss, Col. E. G. Plank, one-time "mayor" of Fort Peck Village, more recently head of the airbase section in the office of the Chief of Engineers in Washington and for a good many months now base section commander of S. O. S. troops in an important area in Great Britain says "well done" to Capt. T. P. DeWan for a job of airfield construction.

JOBS OF THE WEEK

HOSPITAL, Bridgeport, Conn.

E & F Construction Co., Bridgeport, has been awarded the contract for the construction of a hospital at Grant and Mill Hill Sts., by the Bridgeport Hospital at $553,000. The completed project will cost $775,000. Stevens, Curtin, Mason & Riley, Boston, Mass., are the architects. FWA will finance.

APRONS, RUNWAY EXTENSIONS, Texas

L. F. Dow Co., Inc., Los Angeles, Calif., will build aprons, runways extensions, taxiways, and application of dust palliative in Dallam County. U. S. Engineers, Tulsa, Okla., awarded the contract. The cost is from $500,000 to $1,000,000.

BUILDING, Washington

J. C. Boespflug Construction Co., Seattle, Wash., will construct building in Pierce County for U. S. Engineers, Seattle, $1,000,000 to $3,000,000.

IMPROVEMENTS, Idaho

Morrison-Knudsen Co., Inc., Boise, Idaho, awarded a contract for improvements, Bear Lake County, by U. S. Engineers, Seattle. The estimated cost is $500,000-$1,000,000.

TRAFFIC CONTROL SYSTEM, California

Western Pacific Railroad Co., T. L. Phillips, chief engineer, San Francisco, Calif., will install in 118-mile Feather River Canyon a stretch of railroad in Plumas and Butte Counties. Union Switch & Signal Co., Swissvale, Pa., will furnish the equipment. The estimated cost is $1,300,000.

IMPROVEMENTS, Arizona

U. S. Engineers, Los Angeles, Calif., received the lowest offer from Basich Brothers Construction Co., Alhambra, Calif., for improvements, in Cochise County, at a cost of less than $1,000,000.

RAILROADS, BARGE PIER and TRESTLE, etc., New Jersey

Bureau of Yards & Docks, Navy Dept., Washington, D. C., awarded a contract for railroads, barricaded sidings, temporary administration building, Naval Ammunition Depot, and a barge pier and trestle to Elmhurst Contracting Co., New York, N. Y. The estimated cost is $3,834,753.

PLANT, Wyoming

Defense Plant Corp., Washington, D. C., awarded a contract for the construction of an aluminum plant to Monolith Portland Midwest Co., Los Angeles, Calif. The estimated cost is $3,000,000.

HOUSING, Warren, O.

N. K. Winston Co., New York, N. Y., has been awarded a contract for single and duplex dwellings, by Eastgate, Inc., Warren, O. The estimated cost is $1,250,000.

FACTORY, Vermont

Mahony-Troast Co., Passaic, N. J., will alter and improve a factory building and construct a sewerage system for the Bell Aircraft Corp., Buffalo, N. Y. The estimated cost is $500,000-$1,000,000.

HOUSING, Michigan

Kuehne-Simmons Co., River Rouge, Mich., has been awarded contract for River Rouge Housing, by Public Housing Authority, Cleveland, O., $711,940. W. E. Knapp, Detroit, Mich., is architect.

APRON EXTENSION, Oklahoma

Western Contracting Corp., Sioux City, Ia., has been awarded a contract to construct apron extensions, Oklahoma County, by U. S. Engineers, Tulsa. The estimated cost is $500,000-$1,000,000.

HOUSING, Nebraska

Paul Steenburg Construction Co., St. Paul, Minn., was lowest bidder for constructing housing, cafeteria and community houses when Public Housing Authority, Kansas City, Mo., opened bids at $686,650. Davis & Wilson, Lincoln, Neb., are architects and engineers.

IMPROVEMENTS, Georgia

McDougald Construction Co., Atlanta, Ga., has been awarded a contract for improvements, Dougherty County, by U. S. Engineers, Savannah, Ga., cost will be less than $1,000,000.

Note—Additional bidding and contract news on many projects large and small appear in the Construction News section beginning on page 17.

Engineers' research needs help of industry

Industrial financing of university research in engineering must supplement the present system of private endowment in the postwar period, Professor James Kip Finch, Associate Dean of the School of Engineering, Columbia University, said in his annual report to Dr. Nicholas Murray Butler, president of the University.

"The university must turn to industry for the increased support necessary not alone for the maintenance of fundamental research but to make possible that expansion of research activities which will be essential to the maintenance of both industrial and educational leadership in the postwar world."

"American business and industry now face a challenge which will impose new problems and opportunities for engineering education. There are vital general factors which will condition or limit this revival—a longer-range viewpoint on the part of labor, the abandonment by the government of its antagonistic and destructive attitude and its cooperation in the restoration and expansion of our business life, international finance and the establishment and maintenance of a world wide market for the products of our industrial plants.

"Yet the potentialities of science and engineering have not been exhausted. There are still to be uncovered and utilized new products and new processes which will play a major part in raising our economy to new levels of accomplishment. Our engineering schools must cooperate with industry to the fullest possible degree in carrying forward the research essential to these developments.

"The older, still largely empirical standardized handbook practice and methods of the past will not carry the engineer very far in an age of new materials and methods which will require new techniques, and active and constructive imaginative powers.

"Both a trained imagination, backed up by a thorough knowledge of basic principles and skill in using the latest tools of technical analysis, as well as sound judgment, an ability to keep one's feet on the ground, will be required in the days to come."

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Government has recovered 3½ billions war profits

By the process of renegotiation during the past 14 months, a total of $3,555,174,000 in excess profits has been sliced off war contracts, the War Department, Navy Department and Maritime Commission have jointly revealed. The government has actually recovered $1,523,748,000, the remaining $2,031,426,000 representing reductions for further deliveries.

ake Ontario water level t highest ever recorded

ater level of Lake Ontario is now very ly receding from its highest point on d. On June 9 it reached 249.08 feet e sea level which is 1¼ inches higher any level ever previously recorded. ughout June and early July the level not vary much but it is now going at approximately the same rate as in years of high water levels. The high r level has resulted in flooding of lakeside property and during s serious damage has been done.

l Great Lakes levels have been high summer, as shown by the following :

ke Superior: Reached a point only inches lower than the highest level recorded in June since 1860, the ge level for June being 10¾ inches er than the average since 1860.

ke Michigan: The level is 0.79 feet er than a year ago. The lake is at ighest level since 1931, being 18 in. e the average.

ke Huron, at Goderich: ¾ inches r than the average level for June.

ke Erie at Port Colbourne: 12 inches er than the average level for June. gives more power at Niagara.

. Lawrence River at Montreal: 7½ es higher than the average level for .

e explanation of the high water in Great Lakes is unusually high precipi- n in their watersheds, but undoubt- another reason for the increase, in Superior at least, is the diversion of) cfs. from the Albany River water- over into Lake Superior. This has in progress for some months to itate the bringing down of pulpwood R July 15, p. 158).

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estchester County acts o control floods

vision of Westchester County, New , just north of New York City, six flood-control areas and an ex- iture of $75,500 for an engineering y of methods of controlling floods ch area has been recommended to ounty board of supervisors by James rding, county commissioner of pub- orks. The supervisors endorsed Mr. ing's plan and it is probable the budget will be reopened so that urvey funds can be appropriated.

e flood-control areas and the survey as established by Mr. Harding are: x River Valley, $16,850; Sawmill Valley, $4,350; Hutchinson River y, $15,950; Beaver Swamp in Har- , $8,700; Mamaroneck-Sheldrake Valleys, $15,700, and Blind Brook y in Rye and Harrison, $13,950.

MEN AND JOBS

William A. Alaband is the civil engineer in charge of the Bear Swamp drainage project just begun near Edenton, N. C., which is designed to release thousands of acres of rich farm lands in Cowan and Perquimans Counties in eastern North Carolina.

Ralph J. Stehling, chief engineer for the Charles H. Stehling Co., Milwaukee, Wis., has been commissioned a lieutenant in the Navy and will serve as a Naval adviser in the Boston area.

W. W. Thorne, who had been loaned to the Public Roads Administration for three months to supervise the inspection and repair of WPA equipment to be used on the Alaska Military Highway, has returned to Grinnell, Ia., as division maintenance engineer of the Iowa State Highway Commission.

Garner Poole of Marlin, Tex., has been sent to Peru by the Rust Engineering Co. to head a construction project there.

H. S. McElroy, formerly project engineer for the Mississippi Highway Department with headquarters at Natchez, has been promoted to assistant district engineer for the Southern Highway District of Mississippi.

Transferred to Louisville, Ky., from Cincinnati, Ohio, **Lt. Col. J. H. Veal,** West Point graduate in 1931, has taken over the position of Louisville district engineer for the U. S. Engineer Corps. He succeeds **Col. Henry F. Hannis,** who left recently for military duties elsewhere.

W. C. Pruett, superintendent of the Katy Railroad at Wichita Falls, Tex., former district engineer for the Katy at Waco, Tex., has reported to Washington for active army duty as a lieutenant colonel.

Roswell P. Rosengren was advanced from major to the rank of Lieutenant-Colonel in the Corps of Engineers on June 8. Colonel Rosengren is in charge of the technical review branch of the War Department bureau of public relations, at Washington.

Lt. Col. James D. Lang, Corps of Engineers, has been transferred from executive officer for Alaska services for the Seattle Engineer District to the Airborne Command at Camp Mackall, N. C. He had been in Seattle since 1938, serving as resident engineer for Mud Mountain dam in 1939 to 1940. **Lt. Byron J. Clark,** Corps of Engineers, has been assigned to Seattle as assistant in the Alaska operations division. A Seattle engineer, he had previously been on duty in Alaska in connection with military construction work.

J. D. Millar has been appointed Deputy Minister of Highways for Ontario, succeeding R. M. Smith who resigned because of ill health.

Colonel Henry F. Hannis, who took charge of the Louisville, Ky., District of the Corps of Engineers a few months ago, has been transferred to active service at Camp Claiborne, La.

Raymond L. Brandes, formerly with Barney-Ahlers Construction Co., is now chief engineer of The Nicholson Co. of New York, designers and builders of concrete bins and tanks.

F. R. Wilford of Lindsay, Ont., has been appointed acting county engineer and road superintendent for Victoria County, Ont., in place of his son, H. D. Wilford, who is on leave of absence while on active war service.

Captain Peter O. Peterson, Jr., new executive officer for the United States Engineering Corps at Topeka, Kansas, succeeds Captain R. J. Wier, who has been transferred.

Harry L. Crosby, Kansas City, Mo., formerly assistant engineer for Wm. F. Lozier, Broderick & Gordon, engineering-contractors, Sunflower Ordnance Plant, has been commissioned Lieutenant Assistant Engineer in the Civil Engineering Corps of the U. S. Naval Reserves.

Les Cabaniss, senior resident engineer of the State Highway Department district office at Paris, Tex., has been commissioned a first lieutenant in the Army. He is stationed at Fort Belvoir, Va.

Governor Raymond E. Baldwin of Connecticut has named new members of the New London Bridge Commission to replace the four members who resigned July 1, as follows: **Ralph W. Matteson,** New London; **Charles T. Crandall,** Groton; **Paul Holdredge,** Ledyard; and **Harry Schwartz.** The commission will fill out the unexpired term of the retired commissioners running to July 1, 1944.

D. A. Helmich, Jefferson County, Ala., engineer, has resigned to accept a commission in the Naval Reserve.

Frank Murray, assistant division engineer in the State Highway Department of Ashland, Ohio, has been commissioned a lieutenant in the Seabees. He has reported at Camp Peary, Williamsburg, Va. H. W. Mittendorf, has been named his successor.

Construction Communiques

Engineering News from the Battlefronts

Attu—"While the battle for Attu was still going on, army bulldozers moved in behind the front lines and have been at work ever since," says William L. Worden of the Associated Press. A network of roads which our engineers know is necessary to complete defense or even to live decently on the island is beginning to be pushed through. In the meantime docks also are being constructed.

Among the things the Japanese never had on Attu were good telephone lines, decent drinking water, comfortable barracks, a usable airfield, and interior lines of communication. All these our army engineers have built or are building.

The following editorial from the *New York Times* of July 29 speaks for itself. It was inspired by two photographs from Attu Island, one of which is reproduced in an adjoining column.

BUILDERS AND WARRIORS

Two photographs from the island of Attu in the Aleutians, where quite a number of Japanese recently spent their last vacations, catch the eye. One is a tent city, with a wooden store or something of the sort in the midst of it and a snowy mountain in the background. The other shows some bulldozers shoving dirt around, down by the waterfront. These things look familiar. After a moment one sees why. The tent city is Nome during the gold rush, or Tonopah in winter, if preferred. The bulldozers are any construction job with water in it—a TVA dam, for instance. This happens to be part of a war, but the pictures show the sort of jobs outdoor Americans have been working at for many years in time of peace.

It is the hard but not the unhappy side of war. It makes one see that killing and destroying are not all that brings victory. Indeed, by themselves, they might not take us far. It is because we are good at building that we can have confidence, both now and for a future time. Who hasn't thrilled at a construction job going smoothly forward? A skyscraper soaring in a city with traffic moving all the while around it, a big bridge, a dam, a highway—it doesn't matter what. The hearty courage that makes these achievements possible can also be used in combat. But it was developed in peace and it will survive after it is no longer needed in war.

★ ★ ★

South Pacific—Army Engineer survey parties in the South Pacific theater are pathfinders. Their usual method of travel is by plane, parachute, and on foot. In selecting sites for airfields in northern Australia, engineer surveyors often bail out of reconnaissance planes over a likely looking spot, complete their analysis of the site on the ground, then travel on foot back to the nearest base.

In New Guinea, engineer working parties, oftentimes far forward in areas theoretically under Japanese control, were supplied by low-flying cargo planes which bombed them with packages of food and equipment. The jungle growth effectively broke the fall of the supplies. The bombardier's aim, however, had to be superior, since a miss of a few hundred yards in that rugged jungle was as good as a mile.

★ ★ ★

North Africa—Brig. Gen. C. L. Sturdevant, Assistant Chief of Engineers, gives the following information about what our army engineers have been doing in Africa.

"The coastline of northwest Africa is ringed with airdromes. For the most part, American Army Engineers with earthmoving equipment such as no army has every possessed are responsible for this chain of bases.

"Some of the feats accomplished by those engineers under enemy aerial bombardment and battle conditions are as inspiring to the Allies as they must be terrifying to the Axis. When the Air Force equipment was first landed ne
Casablanca, mud was a real enemy.
one time more than 285 planes were mire
down and out of use because of a lack
dry surface runways. To find room
disperse the planes, it was necessary
move up onto the Tibesso plateau. He
there was room for a dozen airdrome
and there was much less rain. Within
few weeks the engineer battalions h
completed ten airdromes from whi
heavy bombers operated for the rest
the winter.

"At the same time, the airborne engi
eers moved down into the edge of t
Sahara Desert and discovered at Biskra
plateau on which they built a field
heavy bombers. Enough airborne engi
eers and equipment were moved in
single day in 56 transport planes to car
out a quick construction job which p
mitted daily bombing raids against It
and the southern islands.

"One of the toughest jobs of the Nor
African campaign fell to the engine
who inherited the job of constructing
railroad to Tebourbo. The Germans h
torn up all the bridges, and the engine
with bulldozers and tractor-drawn p
put in earthfills. Some of these reache
height of 30 or 40 ft. and were seve
hundred feet in length."

World Wide

Engineers build the Attu section of the "Tokio Trail"

The U. S. Army engineers and labor battalions are building roadways through Attu where there were no roads before. They call them part of the "Tokio Trail." The pho graph reproduced above shows construction on an operational ramp.

WASHINGTON HIGHLIGHTS

The establishment of uniform contract mination policies by the chairman of War Production Board is due for in- sion in legislation which Senator mes E. Murray, chairman, proposes to sent to his Senate committee when ngress reconvenes. The proposed legis- ion will provide for prompt and liberal yments in advance of final settlement all prime contractors and subcontract- whose contracts are terminated be- use of shifting military needs. Senator urray says more than 3,700 prime con- cts have already been terminated by War Department alone and that of ese 2,300 are still unsettled. "Unless ick remedial action is taken the result l be widespread insolvency and unem- oyment," he says. "And conversion to her essential war production would be iously handicapped."

Twenty-two small items of used con- uction equipment, irrespective of nership, have been exempted from gistration by WPB. They include such ms as rock drills, jackhammers, eens, kettles and heaters. Still subject registration, in order to put such uipment back into active service, are 82 ms of used construction equipment.

The final windup of the Public Works ministration has become effective by executive order of the President which transfers functions and powers of PWA to Federal Works Agency, of which it was a unit. In a state of liquidation for a couple of years, its duration had been extended from time to time to permit completion of a number of projects.

A few projects still are incomplete, including the Chicago subway. That project was enlarged after it was started. Such situations as lack of materials or legal action have held up other jobs.

The total construction program under PWA amounted to about six billion dollars. Among the large and important undertakings were the Grand River Dam in Oklahoma, and the Pennsylvania Turnpike.

A 20,000-kw steam plant at Pensacola, Fla., to be built by the Gulf Power Co., is scheduled for completion early in 1945. This is one of seven additions to the nation's power capacity announced by J. A. Krug, director of the office of war utilities, War Production Board, planned for 1945. The program will add about half a million kilowatts to the nation's generating capacity.

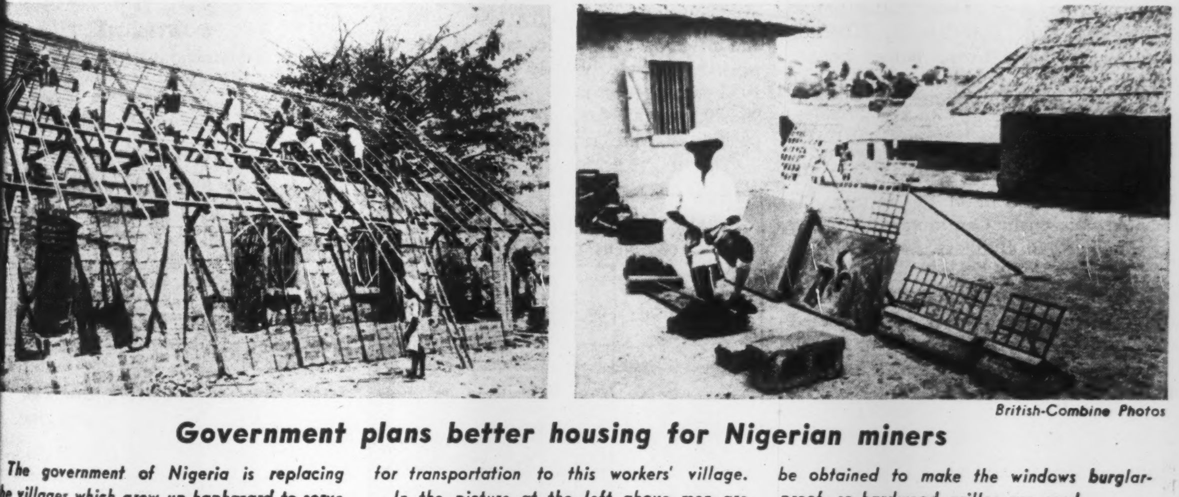
Three additional war construction projects have won the Army-Navy Production Award. They are: Island End Job, Fort Dawes, Dear Island, Winthrop, Mass., built by J. F. Fitzgerald Construction Co., Winthrop; New First Lock Construction Project, Sault Sainte Marie, Mich., built by Great Lakes Dredge and Dock Co., Chicago; and Port Johnston Terminal Construction Project, Bayonne, N. J., built by Charles F. Vachris, Inc., Bayonne.

Most hardwoods and most one-inch boards of all species have been placed on the list of "materials insufficient for essential war and industry needs" by the War Production Board. Suggested substitutes for lumber are asphalt laminated board, asbestos cement sheets, granule surface insulation board, and structural surface board.

To encourage the construction of privately financed war housing, the War Production Board and the National Housing Agency have declared a joint policy permitting builders to sell to in-migrant civilian war workers as many as a third of the total dwelling units they build in war housing areas under priorities applied for since Feb. 10. Sales must be consummated within 15 days after final inspection by F.H.A.

Remaining units cannot be sold until after two months' rental occupancy, and then at the option of the tenant. Formerly, all such privately financed war housing could not be sold until after four months' rental.

Other changes include reconsideration of established rents if unforeseen additional costs are incurred during construction, rental for garage space, and addition to the rental charge of actual cost, on a pro rata basis, of gas and electricity supplied tenants.



British-Combine Photos

Government plans better housing for Nigerian miners

The government of Nigeria is replacing the villages which grew up haphazard to serve the Nigerian collieries with new, well-planned housing. The model village of Udi Siding, completed in April, 1943, is the first of three such villages. On a site of 12 acres, 330 rooms have been built in separate two- and four-room houses, each standing in a plot at least 60 ft. x 40 ft. for a two-room house, or 60 ft. x 80 ft. for a four-room house. Two miles of road have been built for transportation to this workers' village.

In the picture at the left above men are shown at work on a 4-room house of semi-detached cottages. The main construction is of concrete block, with brick piers and arches. The roof scantlings are then laid, and bamboo strips are placed on the scantlings and tied down. The thatch roof goes on top of the bamboos. When corrugated iron is available it will be used, but during wartime only thatch is available. Expanded metal cannot be obtained to make the windows burglarproof, so hardwood grilles are used.

In the picture at the right are shown experiments with local materials. Reinforced concrete was required, but there was no steel. However, it was found that a thin-lattice-work of bamboo strips gave all the reinforcement necessary. Slabs two inches thick were tested with a weight of two tons and showed no deflection. The blocks were made out of coal ash and cement.

OBITUARY

W. Howard Fairchild, 70, former city engineer and manager of the Galt, Ont., Public Utilities Commission, died recently.

Otis Sheppard, 61, Bloomfield, Mo., water commissioner, died July 23.

J. E. Hodges, president of the Hodges Construction Co. of Cincinnati, Ohio, died July 14. In the past 20 years his company has built many of the largest buildings in Cincinnati and vicinity, including the Chamber of Commerce Building, the Portsmouth, Ohio, waterworks and reservoir, and many other buildings, bridges and engineering structures in that part of the country.

James D. Fauntlery, 74, who was United States highway engineer for Virginia until his retirement in 1939, died July 20, at Altavista, Va.

E. R. Bingham, engineer who laid out the townsites for the Canadian Pacific Railroad in British Columbia, died July 2.

Walter Bradley, 83, retired civil engineer and New York contractor, died in St. Petersburg, Fla., July 22. Mr. Bradley, whose former home was in Phoenix, N. Y., got his start in the construction field by working as a diver on repair work on the New York State barge canal. He built the dam at Minetto, the Oswego Falls Corp. power house, and a number of other central New York industrial buildings.

Roger Van Vechten, Sr., 50, Wauwatosa, Wis., died July 16 in Milwaukee. He was a past president of the former Associated Wisconsin Contractors, now the Wisconsin Road Builders Association.

George H. Schauweker, 90, retired steel mill construction engineer who directed the building of the sheet plant of the Sharon Steel Corp., Sharon, Pa., died at his home in Youngstown, Ohio, July 14.

George F. Carnes, 60, city civil engineer at Canton, Ohio, for 14 years and later a member of the Canton Planning Commission for 5 years, died at his home in that city July 16.

Hyrand A. Sivaslian, 58, of Akron, Ohio, died July 22. For the last three years he had been in charge of construction for the various plants of the Goodyear Aircraft Corp. He joined the Goodyear Tire & Rubber Co. as a civil engineer a number of years ago and at various times went to South America in the interests of his company. He was a member of the Ohio Society of Professional Engineers.

Fritz A. Lindberg, 63, chief engineer and manager of the engineering department of Armour & Co., Chicago, Ill., died July 18 at Evanston, Ill.

Charles S. Krick, 77, retired vice president of the Pennsylvania Railroad, died July 29 at St. Davids, Pa.

Mr. Krick retired in 1936 after forty-nine years of service with the railroad. He was graduated in 1887 from Lafayette. In college Mr. Krick played quarte back on the Lafayette football team an was regarded as one of the fastest backfield men of his day.

Mr. Krick entered the service of th Pennsylvania Railroad on July 11, 188 as a rodman in the assistant engineer office of the Schuykill division, and wo steady promotion through the years.

With the termination of Federal control of the railroad in 1920, Mr. Kric was appointed general manager of th eastern region with offices in Philadelphia. Three years later he was promoted to vice president in charge of th eastern division.

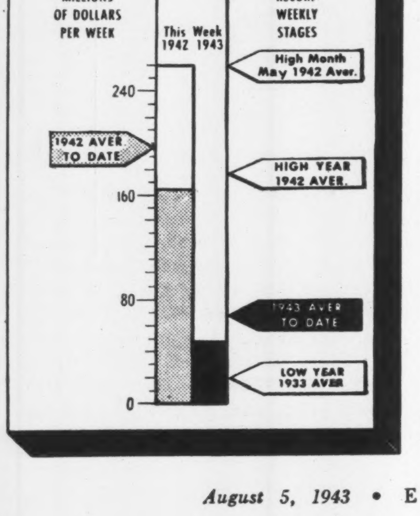
CONTRACTS AND CAPITAL

Civil engineering construction in continental U. S. totals $47,489,000 for the week. This volume, not including the construction by military combat engineers, American contracts outside the country, and shipbuilding, is 15 percent higher than in the preceding week, but is down 71 percent compared with the volume reported for the corresponding 1942 week. Private construction is 2 percent above last week, and public work gains 18 percent as a result of the 3 percent increase in state and municipal construction and the 19 percent climb in federal volume. Private and public volumes, however, are 23 and 74 percent lower, respectively, than in the 1942 week.

The current week's volume brings 1943 construction to $2,110,029,000, an average of $68,065,000 for each of the 31 weeks. On the weekly average basis, 1943 construction is 65 percent below the $6,270,793,000 for the 32-week 1942 period. Private construction, $261,518,000, is 35 percent lower, and publi work, $1,848,511,000, is down 67 pe cent, when adjusted for the difference the number of weeks.

In the classified construction group gains over last week are in seweras commercial and public buildings, eart work and drainage, streets and road and unclassified construction. Earthwo and drainage is the only class of wo to gain over a year ago.

New capital for construction purpo for the week totals $397,000, and is ma up entirely of state and municipal bo sales. New construction financing f the 31 weeks of 1943, $2,921,585,000, 68 percent lower than the $9,508,625,0 reported for the 32-week period last ye



CONTRACTS

Continental U. S. Only
(Thousand of dollars)

	Week Ending Aug. 6 1942	July 29 1943	Aug 194
Federal	$146,380	$31,913	$38,0
State & Municipal	9,319	3,034	3,1
Total public...	$155,699	$34,947	$41,1
Total private..	8,274	6,207	6,3
TOTAL	$163,973	$41,154	$47,4
Cumulative			
1943......(31 weeks).......			$2,110,0
1942......(32 weeks).......			$6,270,7

Note: Minimum size projects included ar Waterworks and waterways projects, $1 000; other public works, $25,000; industri buildings, $40,000; other buildings, $150,0

NEW PRODUCTIVE CAPITAL

	Cumulative 1942 32 weeks	1943 31 week
NON-FEDERAL .	$541,727	$267,74
Corp. Securities.	163,784	15,32
State & Mun...	166,824	92,29
R.F.C loans...	128,419	9,00
FPHA loans...	....	3,13
R.E.A. loans...	....	20,00
Fed.-Aid Hwy..	82,700	128,00
FEDERAL	$8,966,898	$2,653,83
TOTAL CAPITAL	$9,508,625	$2,921,58

ENR INDEX NUMBERS

Index Base = 100		1913	192
Construction Cost..	July '43..	289.92	139.3
Building Cost.....	July '43..	227.89	123.1
Volume	June '43..	204.	89.

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York
ELSIE EAVES, Manager *SCOTT McLEOD, Statistician*
(Daily service also available—Write for details)

WATER SUPPLY

, Ottumwa—City, water mains extension, 000. H. A. Brown, city engr., and Supt. Waterworks. CD 3/2—ENR 2/4.

Tex., Dallas—V. R. Smithan, city mgr., water distr. sys. imprvs., 36 in. main from hman plant to downtown areas, etc. ,000. H. Bartholomew, 317 N. 11 St., St. is, Mo., consult. engr.

Washington—U. S. Eng., 800 Third Ave., tle, Zone 4, water distr. sys., Neg. No. 699, Co.

DS ASKED

Bids Asked August 12

Mo., Neosho—City. G. Woods, mayor, City WW imprvs. Part 1, incl. 2 brick pump es, 1 brick booster pump house, rein-con. rvoir, 2 booster pumps, furnishing, laying ermains, etc. Part 2, incl. drilling, casing, enting, testing 2 deep wells, etc. **$280,000.** A. H. T. Lawrence, 3244 N.W. 14 St., Okla- a City, Okla., engr.

OW BIDDERS

N. Y., Farmingdale—Bd. Village Trustees, age Hall, 361 Main St., July 26, **gravel** type well, pump. sta. and connecting lines, equip., appurtenances, Docket N. Y. 19, from C. W. Lauman Co., Inc., 50 rch St., New York, **$24,976. FWA.** CD —ENR 7/1.

S. C., Union—City, July 27, pumping station, 2, from Fiske-Carter Constr. Co., Spar- burg, $25,205. Harwood-Beebe Co., Spar- burg, engrs. CD 7/20—ENR 7/22.

NTRACTS AWARDED

Florida—U. S. Eng., 575 Riverside Ave., ksonville, Zone 2, addnl. water and sewer- facilities, **Neg-Jax-44-37, Clay Co.,** to el Constr. Co., **Graham Bldg., Jacksonville,** er **$50,000.** Awarded 7/22.

Washington—U. S. Eng., 800 3 Ave., Seattle, e 4, wells, Pierce Co., to Roscoe Moss Co., Worth St., Los Angeles, Calif., under **$50,-** CD 7/20—ENR 7/22.

Florida—U. S. Eng., 575 Riverside Ave., ksonville, Zone 2, deep well turbine pump, mical feed machine, constructing aerator, r and tower, filter tank and wood stave ulation tank, etc., Contr. 436-Eng-10448, ier Co., to R. A. Clarson, Inc., St. Peters- , under **$50,000.**

Florida—U. S. Eng., 575 Riverside Ave., ksonville, Zone 2, addnl. water and sewer , NEG-JAX 43-982, Pinellas Co., to ns Constr. Co., 4011 First Ave. N., Birm- am, Ala., under **$100,000.** Awarded 6/6.

Massachusetts—U. S. Eng., 31 St. James , Boston, water sys., exploratory well drill- Barnstable Co. to E. F. Hughes, 53 State Boston, under **$50,000.**

Nevada—U. S. Eng., 751 S. Figueroa St., Angeles, 14, Calif., addnl. water supply ities, No. 108, **Clark** Co., to J. A. Klar- t, 618 S. Western Ave., Los Angeles, Calif., r **$50,000.** Awarded 7/20.

, Ashtabula—American Water Works & tric Co., G. W. Biggs, ch. engr., 50 Broad New York, N. Y., 3,000,000 gal. reservoir Kerkner Constr. Co., 5450 Hamilton Ave., eland, **$50,000.** CD 1/20—ENR 1/28.

Texas—U. S. Eng., 416 Wright Bldg., a, Okla., well pump house, wash racks, station, etc., Sol. 957-Neg-43-347, Gray to Wise & Bales Constr. Co., N.W. 19 St., homa City, Okla., **$50,000-$100,000.** CD —ENR 7/15.

Washington—U S. Eng., 800 Third Ave., tle, Zone 4, tank installation, Kitsap Co., . G. Clark, 408 Aurora Ave., Seattle, Zone nder **$50,000.**

SEWERS, WASTE DISPOSAL

ROPOSED WORK

Conn., Stratford—Wm. H. Shea, town mgr., Town Hall, exten. incinerator plant., $800,- Applied for FWA funds. M. J. Jankow- town engr. CD 7/23.

I., Portsmouth—Bd. Selectmen, Town incinerator plant exten.

Location of ENR Correspondents

Symbols and Abbreviations Include:

†	Federal Government
★	Project of $500.000 or over
ENR	Engineering News-Record
CD	Engineering News-Record Construction Daily
A-E-M	Architect—Engineer-Management type of contract.

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks, $15,000; other public works, $25,-000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Named in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Unclassified
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings

Stages Reported

PROPOSED: (except Streets & Roads):

BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR);

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

Note: To comply with censorship requirements, addresses on some reports are being generalized. Data which would reveal the purpose of the improvements and the size are withheld. The name of contractor and general area are reported.

Ont., St. Catherines—H. H. Smith, municipality clk., incinerator, B. F. Lamson, City Hall, engr.

Que., Rouyn—Town, mile-long sewer outlet, incl. 1,055 ft. 20 in. pipe, remainder 30 in. pipe, in connection with drainage of Lake Edward. $35,000. J. Dumont, Amos, engr.

BIDS ASKED

Bids Asked August 12

Ill., Chicago—James M. Whalen, vice chm. Com. on Finance, 910 S. Michigan Ave., Des Plaines Unit Tank Plant, constr. unit tank sewage treatment plant consisting Imhoff tanks, 20 ft. diam. by 26 ft. 9 in. deep, screen chamber and pump. station, sewer control structure and misc. pipelines, manholes, for Sanitary Dist. of Chicago, 910 S. Michigan Ave. Plans deposit $15.

Bids Asked August 16

Ill., Lombard—Village Bd. Trustees, monolithic concrete reinforcement lining 9 ft. trunk sewer. Alvord, Burdick & Howson, Civic Opera Bldg., Chicago, engrs.

Bids Asked

Massachusetts—Bethlehem Hingham Shipyard, Inc., East Howard St., Quincy, (selected bidders), brick incinerator plant.

LOW BIDDERS

Calif., San Francisco—Dpt. P. Wks., City Hall, San Francisco, July 28, **Ingleside Sewer,** Sect. A. plain concrete, from Martin Murphy, 734 Santa Fe Ave., Albany, **$112,740. Est. $97,-000.** CD 7/20.

Ky., Hopkinsville—Commonwealth of Kentucky, P. S. Sinton, engr., 110 New State St., Frankfort, July 21, sewage disposal plant, from E. H. Marhoeffer, Jr., Co., Merchandise Mart, Chicago Ill., $76,160. CD 7/13—ENR 7/15.

†Louisiana—Pendleton Shipyards Co., Inc., Masonic Temple, New Orleans, July 24, complete sewerage sys. with pump. sta., bldgs., from Kelly-Generes Const. Co., 124 Carondelet St., New Orleans, **$41,649.** CD 7/20. Federally financed.

Wis., Beloit—City, storm sewers, from Tomaro, Carle and Tomasini, 3404 E. Armour Ave., Cudahy, $25,501. CD 7/12—ENR 7/15.

CONTRACTS AWARDED

California—Title Insurance & Trust Co., Title Insurance & Trust Bldg., **Los Angeles, sanitary** sewerage sys. and pump. plant in proposed tract, No. 13003, **Los** Angeles Co., to Burch & Bebek Constr. Co., 8003 S. Bway., Los Angeles, **$32,608.**

Calif., Lynwood—Sanitary sewers, Dist. 3, to G. Miller 2147 Silver Lake Dr., Los Angeles, **$93,087.** Awarded 7/21.

†Colorado—U. S. Eng., 909 17 St., Denver, sewer line, Contr. 1728-Eng-383, El Paso Co., to L. Pinello Colorado Springs, **$100,000-$500,000.**

†Colorado—U. S. Eng., 909 17 St., Denver, sewage treatment plant, etc., Contr. 1728-Eng-375, Jefferson Co., to Carlson Constr. Co., 4150 Elati St., Denver, under **$50,000.**

†Florida—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, drainage sys. modification, Neg-Jax-43-1105, Polk Co., to J. E. Ballenger, Lakeland, under **$50,000. Awarded 6/24.**

†Michigan—U. S. Eng., 700 Union Guardian Bldg., Detroit, Zone 31, incinerator, Contr. 1088-Eng-3099, Calhoun Co., to Miller-Davis Co., Kalamazoo, under **$50,000.**

†New Jersey—U. S. Eng., 6 and Walnut Sts., Phila., sewage disposal facilities revisions, addns., Contr. 697-eng-4760, Burlington Co., to John A. Johnson Contr. Corp., 268 41 St., Brooklyn, N. Y., under **$50,000.**

†Oklahoma—U. S. Eng., 231 W. Main St., Denison, Tex., sewage force main, Contr. 257-Eng-2427, Tillman Co., to F. S. Oldt, 6617 Lakewood St., Dallas, Tex., under **$50,000.**

†Oregon—U. S. Eng., Pittock Block, Portland, drainage sys., Contr. 698-Eng-3540, Benton Co., to Oscar Butler & Son, 4224 N.E. Alberta St., Portland, under **$50,000.**

†Rhode Island—U. S. Eng., 819 Industrial Trust Bldg., Providence, sewage disposal exten., Contr. 699-Eng-2461, Kent Co., to Dingley Contracting Co., Post Rd., Sudbury, Mass., under **$50,000.** Additional to CD 7/16—ENR 7/22, under CA.

Ont., Weston—Sewage disposal plant, new sewage settling tanks, to H. E. French Constr. Ltd., 530 Russel Hill Rd., Toronto.

Ont., Harrow—Clark Ltd., 955 Amherst St., Montreal, Que., sewage disposal filter beds, to R. J. Wilson, Ltd., 341 Tecumseh St., Windsor. Est. **$32,000.** A. G. Riddell, 73 Proctor Blvd., Hamilton, engr.

Que., Three Rivers—Secretary Dpt. Munitions & Supply, Ottawa, Ont., sewer and watermain, Coteau Camp, for Dominion Govt., Ottawa, to J. Renaud, 145 Laviolette St. Est. **$25,000.**

BRIDGES

PROPOSED WORK

Calif., Santa Ana—Orange Co., rebuilding Del Obispo St. bridge near San Juan Capistrano, A. A. Beard, County Court House, engrs.

Pa., Scranton—Dpt. P. Wks., City Hall, bridge repairs, $75,000.

Wash., Seattle—Bd. P. Wks., County-City Bldg., Zone 4, rebuilding Fourth Ave. S. viaduct over railroad tracks between Jackson St. and Airport Way, $40,000. C. L. Wartelle, County-City Bldg., engr.

BRIDGES (Continued)

Bids Asked August 10

Indiana—State Hy. Comn. S. G. Hadden, chn., Indianapolis, 1 span 15 ft., rein.-con. arch, underfill, over Hilltop Creek north of U.S. Rd. 35, Wayne Co.; 1 span 25 ft. rein.-con. arch, over dredged ditch, Bartholomew Co.; 1 span 75 ft. steel truss bridge over Pigeon Creek east of U.S. Rd. 41, Gibson Co.; 1 span, 20 ft. rein.-con. arch, over Pursely Creek, Blackford Co.; 2 span 32 ft. continuous rein.-con. slab bridge, over Briar Creek, n.e. of Trevlac, Brown Co. Plans deposit $2.75 each set. R. Bower, ch. engr.

Que., St. Felicien—I. E. Vallee, minister Dpt. P. Wks., Quebec City, 9 span, 1,200 ft. steel bridge, on rein.-con. substructure. About $250,000-$300,000. O. Desjardins, Dpt. P. Wks., Quebec City, engr. CD 3/23—ENR 3/25.

Bids Asked August 11

N. Y., Brooklyn—Dpt. P. Wks., Municipal Bldg., New York, excavation, etc. to provide test pit at Brooklyn Anchorage of Brooklyn Bridge. Plans deposit $5.

Bids Asked August 27

Kentucky—State Dpt. Hys., Frankfort, superstructure for bridge over Kentucky River, Jackson-Booneville Rd., SP-13-67, Breathitt Co.; superstructure and approaches for bridge over Rickcastel Creek 0.455 mi., The Louisa-Inez Rd., SP 64-33, Lawrence Co.; grading, draining and low type surfacing 3.44 mi., Crail Hope-Three Springs Rd., SP 85-134, Metcalfe Co.

Bids Asked

Wis., South Milwaukee—Chicago, North Shore & Milwaukee R.R. Co., J. S. Hyatt, ch. engr., 72 W. Adams St., Chicago, Ill., concrete, steel, bridge for interurban railway at Drexel Ave., and at Hawthorne Drive.

CONTRACTS AWARDED

Oklahoma—State Hy. Dpt., Oklahoma City, repairing bridge across Grand River on access road north of Locust Grove, Locust Grove Co., to Moran & Buckner, Muskogee, **$27,125**, est. $35,000; rein.-con. bridge over Huani Creek on State Hy. 199, and bridge over Wilson Creek on State Hy. 199, both Marshall Co., to R. R. Tway, 720 E. 19 St., Oklahoma City, **$71,978** and **$54,480** respectively, est. $73,978 and $55,845 respectively. Grand total $153,583. Bids 7/20, awarded 7/23. CD 7/13, 7/15.

STREETS AND ROADS

BIDS ASKED

Bids Asked August 9

Mich., Detroit—Wayne Co. Rd. Comn., 3800 Barlum Tower, paving, grading, excav., concrete repaving, concrete curb Schaefer Rd., City of River Rouge.

New Jersey—S. Miller, Jr., comr. State Hy. Dpt., Trenton, grading 36,278 sq. yd. 6 in. gravel base course, 35,132 sq. yd. 3 in. modified penetration macadam intermediate course, etc., access roads on Main St., Pine Brook, Hope and Half Mile Rds., Proj. DA-WR-10, 11 and 12, Monmouth Co.

N. Y., New York—President Manhattan Boro, Municipal Bldg., laying, relaying sidewalk and curbs, when and where directed, Manhattan Boro.

Bids Asked August 10

Iowa—State Hy. Comn., Ames, grading 0.291 mi. U.S. 169 from the Des Moines River east to Sect. 13-90-29, P-643; 0.423 mi. Iowa 5 west from Sect. 14-89-29, P-676, both Webster Co.; roadside erosion control 5.919 mi. Iowa 10, FN-358-F(1), Delaware Co.; 1.291 mi, DA-NR-1, Wapello Co.; 1.54 mi. DA-WR-5, Woodbury Co.; maintenance resurfacing 11.9 mi. Iowa 148 from Corning to Cass Co., 3.5 mi. Iowa 95 from Carbon to Iowa 148, 4.5 mi. Iowa 155 from Nodaway to U.S. 34, M-4261, Adams Co.; 10.5 mi. U.S. 59 from Emerson to Iowa 184, 3.8 mi. U.S. 34 from Missouri River to Pacific Junction, M-4262 Mills Co.; 5.7 mi. Iowa 9 from Larchwood to South Dakota state line, 8.3 mi. Iowa 26 from Inwood to Iowa 9, M-3283, Lyon Co.; 3 mi. Iowa 9 from Little Rock to Osceola Co., 5.2 mi. Iowa 33 from Minnesota to Iowa 9, stockpiles at Sibley Maintenance yard and at pit in the N.E. ¼, Sect. 6, Twp 99, Range 40W, M-3284, Lyon and Osceola Co.; 6.5 mi. Iowa 333 from College Springs to Iowa 208, M-4263, Page Co.; 16.6 mi. Iowa 12 from Sioux City to Westfield, M-3285, Plymouth Co.; 9.9 mi. Iowa 12 from Akron to point 3 mi. south of Hawarden, M-3286, Plymouth and Sioux Counties; 6.8 mi. Iowa 319 from Conway to Iowa 148, 3.6 mi. Iowa 344 from State Park to Bedford, 15.5 mi. Iowa 148 from Gravity to Missouri state line, M-4264, Taylor Co.; 2 mi. Iowa 265 from Kent to U.S. 34, M-4265, Union Co.; maintenance bituminous surfacing, M-1264, Polk Co.

Bids Asked August 12

Mich., Port Huron—F. W. Moore, chn. St. Clair Co. Road Comn., grading, drainage structures, etc., Range and Davis Rds. $25,000.

Nebraska—State Dpt. Rd. & Irr., Lincoln, soil cement base course, armor coat, 7.7 mi., SN-FA-143-A, Fairmont-York; grading, sand gravel surfacing, concrete paving, culverts, DA-W1-17, Modification center of Martin Bomber Plant, Sarpy Co.; prime coat, bituminous aggregate and patching, armor coat 2.5 mi. oiled road, DA-WR-15, Access Rd. to Grand Island Airfield; sand graveling, Dorchester South, Patrol 11034; Walthill-Pender and Walthill east, Patrol 31033, 31037 and 31073; Louup City, Rickville, Cairo, Patrol 41042; Cairo, St. Paul, Patrol 41048; Dannebrog, St. Libory, Patrol 41049, 41051 and 41055; Ord-Ericson, Patrol 41094; Scotia-Greeley Center and Greeley Center-Bartlett, Patrol 41095 and 41096; Ansley-Taylor-Broken Bow-Arcadia and Comstock west, Patrol 71014, 71015, 71016, 71017 and 71018; Springview-Bassett and Springview north, Patrol 81029; Taylor-Bassett, Patrol 81031; Taylor-Burwell, Taylor Brewster, Patrol, 81033 and 81034. W. G. Scott, state hy. engr.

Bids Asked August 17

Ohio—State Hy. Dpt., Columbus, bituminous treatment 17.59 mi. Sects. SH 896 and 603, Butler and Clermont Counties, $47,678; asphaltic concrete resurfacing 2.918 mi. Sect. B. of SH 254, Clinton Co., $33,500; 5.171 mi. Sects. D, E, J and A of SH 24, U. S. 36 and Sect. Mt. Vernon of SH 339, U. S. 36, Knox Co., $51,120; 3.094 mi. Sects. Crooksville, B and D of SH 350, Perry Co., $48,000; bituminous road mix surface course or asphaltic concrete resurfacing 2.263 mi. Sect. Coshocton of SH 407 and 477, Coshocton Co., $16,500 or $32,850; concrete grading, drainage, paving 0.487 mi. Sect. Van Wert and E of SH 418, U. S. 30, Van Wert Co., $53,400; grading, drainage, widening, asphaltic concrete resurfacing, roadside imprv. 0.442 mi. Sect. Wooster of SH 96, Wayne Co., $35,500; removing existing timber bents and replacing with creosoted timber bents on bridge over Pennsylvania R. R., Sect. N of SH 413, U. S. 36, Tuscarawas Co., $6,100.

Washington—State Hy. Dpt., Olympia, removing, reinforcing, widening paving, 0.426 mi. State Hy. 5, Alder to Elbe, Pierce Co.; grading, draining, ballasting, surfacing, stockpiling 6.03 mi., primary Hy. 8, Goldendale to Yakima Co. Line, Klickitat Co.; surfacing 17.1 mi. primary Hy. No. 7, Quincy to Ephrate, 16.3 mi. Stratford to Lincoln Co. Line, 21.9 mi. Coulee City to Soap Lake, Grant and Douglas Counties; clearing, grubbing, grading, draining, surfacing, stockpiling 4.7 mi. primary Hy 5, Mill Creek to Mossy-creek and 2.7 mi. Nesika bridge to Kosmos, Lewis Co.; clearing, grubbing, draining, grading, riprap, surfacing timber bridge and redecking drifting bridge 0.7 mi. Seabeck Rd., Kitsap Co. Plans deposit $2. B. Bantz, state hy. engr.

Bids Asked August 18

California—State Div. Hys., Sacramento, grading and applying bituminous surface treatment 1.2 mi. and road mix surfacing 2 mi. road between Eagle Field and Russell Ave., Fresno Co., and between South Dos Palos and Dos Palos, Merced Co.; grading, plant mix surfacing 1.5 mi. Willow St., North Dr., Carlton and Occidental Aves. between Buena Vista Ave., and Pollock Shipyard, Dist. X, San Joaquin Co.; furnishing, placing imported borrow, plant mix material and asphaltic concrete paving, applying seal coat to plant mix surfacing and imported borrow on parking areas and shoulders 1.3 mi. between Toll Plaza and Distribution Structure, Alameda Co.; asphaltic concrete repairing 3.9 mi. road between Dublin and Castro Hill, Alameda Co. G. T. McCoy, state hy. engr.

Bids Asked August 19

California—State Div. Hys., State Bldg., Los Angeles, plant mix surfacing and bituminous surface treatment 3.8 mi. Firestone Blvd. between Marquardt St. and Coyote Creek and on Imperial Hy. between Route 62 and Puenta Rd., Los Angeles and Orange Counties; plant mix surfacing 1 mi. Pearl St. between Sepulveda Blvd. and Centinela Ave., Los Angeles Co. G. T. McCoy, Pub. Wks. Bldg., Sacramento, state hy. engr.

Bids Asked

California—State Div. Hys., Sacramento, rejected bids July 7, imprv. 8.8 mi. Plumas Co.; 5.2 mi. Sutter Co. G. T. McCoy, State hy. engr. CD 7/13—ENR 7/15 under LB.

Iowa—State Hy. Comn., Ames, rejected bids July 27, imprv. roads in Appanoose, Chickasaw, Winneshiek, Davis, Des Moines, Keokuk, Louisa, Lucas and Muscatine Counties. Received no bids July 27 imprv. 2.3 mi. Chickasaw Co. CD 7/16—ENR 7/22.

Ia., Montezuma—Bd. Supvrs., Poweshiek Co. rejected bids 7/26, gravel and crushed rock surfacing various secondary roads. C. E. Olson, county engr. CD 7/16.

†R. I., Newport—City, Dpt. Streets & Hys., City Hall, paving, widening, drainage Maple Ave., RI 37150. **FWA.** $25,000.

LOW BIDDERS

Arizona—State Hy. Dpt., Phoenix, July 21, imprv. 6.75 mi. Ashford-Flagstaff Hy., from Pacific Rock & Gravel Co., 208 W. 8 St., Los Angeles, Calif., **$313,222.** CD 7/15.

†California—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, addnl. roads, No. 293C, Riverside Co., from Calowell Constr. C., 1835 E. Wardlow Rd., Long Beach, over **$100,000.**

California—State Div. Hys., G. T. McCoy, engr., Pub. Wks. Bldg., Sacramento, July 28, imprv. 10.2 mi. Tehama Co., from E. B. Bishop, Orland, **$56,140.** CD 7/12—ENR 7/15.

Georgia—State Hy. Dpt., Atlanta, July imprv. 5 mi. Summerville-Rome Rd., Chattooga, Floyd Polk and Walker Counties, from W. L. Cobb, Inc., Decatur, $[illegible],732.

Idaho—State Dpt. P. Wks., Boise, plant mi bituminous surfacing 11.203 mi. Elmore, Ad and Gooding Counties, from Triangle Const Co., 1709 Crescent Rim Dr., Boise, $133,40 Est. $153,614. J. D. Wood, Boise, state eng

★**Illinois**—Dpt. P. Wks. & Bldgs., Div. Hy Springfield, **July 23,** imprv. 16.43 mi. Bow and Schuyler Counties, from Asphalt Distribu ing Co., East St. Louis, **$114,190*****4.65 mi. a 3.5 mi., Montgomery Co., from Harris Engineering & Constr. Co., Fairfax Bld Kansas City, Mo., **$331,393** and $247,088 re spectively. CD 7/14.

Kentucky—Dpt. Hys., Frankfort, July imprv. 4.242 mi. Boone and Kenton Count from Fuller-Daviess Co., Frankfort, $168,882 8.1 mi. Bell and Harlan Counties from Ken tucky-Virginia Stone Co., Middlesboro, $40,1 ***0.312 mi. Boyd Co., from J. A. Codell Co., Winchester, **$37,296*****1.155 mi. Car Co., from R. R. Dawson, Bloomfield, $26,17 11.950 mi. Henderson Co., from R. M. Rob ston, Owensboro, **$59,049*****4.478 mi. Lar Co., from Kentucky Rock Asphalt Co., and Dumesnil Sts., Louisville, $56,113***20.0 mi. Lincoln Co., from White Consolidate Inc., 1735 W. Fullerton Sts., Chicago, Il **$80,312*****0.132 mi. McCracken Co., fro Forcum-James Co., Dyersburg, Tenn., $109,3 ***1.489 mi. McCracken Co., from Car Constr. Co., 613 Citizens Bank Bldg., Lexin ton, **$26,697*****14.265 mi. Pulaski Co., fro Rock Road Constr. Co., 5915 N. Rogers St Chicago, Ill., **$57,536.** CD 7/13—ENR 7/

Virginia—Dpt. Hys., Richmond, July imprv. 1.6 mi. Proj. FS-1414-A(2), Essex C from Sam Finley, Inc. & H. G. McCarn Co., Roanoke, **$91,102,** alt. $104,680. CD 7/

†Virginia—Pub. Rds. Admin., 18 and F S N.W., Wash., 25, D. C., July 29, grad DA-VA-WR-8, Arlington Co., from Corson Gruman, 33 and K Sts. N.W., Wash., D **$76,878. FWA.** CD 6/26.

Wash., Seattle—City Bd. Pub. Wks., Coun City Bldg., Zone 4, July 29, paving 30 A W. et al., from L. Coluccio Co., 512 21 A S., Seattle, Zone 44, **$52,034.** C. L. Wartel County-City Bldg., engrs. CD 7/20—E 7/22.

CONTRACTS AWARDED

California—Title Insurance & Trust C Title Insurance & Trust Bldg., Los Angel grading, paving, curbs and walks., etc., L Angeles Co., to Harvey Adair Constr. C 1147 E. Garvey Ave., El Monte, $57,194.

†Colorado—U. S. Eng., 309-17 St., Denv paving, Contr. 1728-Eng-387, Pueblo Co., Arcole Midwest Corp., 221 N. LaSalle Chicago, Ill., **$100,000-$500,000.**

†Florida—U. S. Eng., 575 Riverside A Jacksonville, Zone 2, roads, parking are walks, Neg-Jax-44-53, Charlotte Co., to J E. Ballenger Constr. Co., Lakeland, un **$100,000.** Awarded 7/27.

†Florida—U. S. Eng., Grant St. west Westwood St., Mobile, Ala., roads, fenc fdns., Contr. 569-Eng-5249, Escambia Co., O. E. Edwards, Pensacola, under $50,000.

†Florida—U. S. Eng., 575 Riverside A Jacksonville, Zone 2, roads, sidewalks, Hi lands Co., to W. L. Cobb Constr. Co., 110 St., Tampa, under **$50,000.** Awarded 6/2

†Florida—U. S. Eng., 575 Riverside A Jacksonville, Zone 2, clearing, grubbi excav., stabilization, limerock base cou bituminous surface treatment, drainage fa ties, Contr. 436-Eng-10451, Taylor Co., Marion Contracting Co., Ocala, $50, **$100,000.**

Ia., Pocahontas—Bd. Supervs. Pocahon Co., gravel surfacing 154.8 mi. second roads, to Midwest Limestone Co., Gilm City, **$28,195.** A. L. Thornton, Pocahon co. engr. Awarded 7/20.

Missouri—State Hy. Comn., Jefferson C grading, gravel surfacing 5.948 mi., John Co. Own forces. **$32,958.** C. W. Bro engr.

★**†New York—U. S. Eng.,** 120 Wall New York, Zone 5, paving, Orange Co., Arute Bros. Inc., New Britain, Conn., $500, **$1,000,000.** Bids 6/24. CD 6/18.

†Oklahoma—U. S. Eng., 231 W. Main S Denison, Tex., paving, drainage, Contr. Eng-2354, Jackson Co., to Bell & Brad Amarillo, Tex., **$100,000-$500,000.**

†Va., Quantico—Yards & Docks, Navy Dp 18 St. and Constitution Ave. N.W., Wash D. C., resurfacing Fuller Rd., Marine Ba racks, NOY 6548, to Helsing Bros., In Woodward Bldg., Wash., D. C.

Oklahoma—State Hy. Dpt., Oklahoma Ci imprv. 0.476 mi. and 0.531 mi. Marshall Co., Dahlgren, Ryan & Brooks, Insurance Bld Oklahoma City, **$55,883** and **$42,406** respec tively, est. $99,319 and $42,406 respectivel Bids 7/20. Awarded 7/23. CD 7/15.

Washington—State Hy. Dpt., Olympi imprv. 7.6 mi. Sheridan Hill-Traceytown mi. Illahee to Brownsville, 6 mi. Valley Rd and 7.4 mi. vicinity of Bremerton, Kits Co., to G. J. Norris, Goodfellow Bros. an Holmberg & Norman, 324 N. 85 St., Seattl **$154,528*****6 mi. Primary State Hy. 7 and 2

DS (Contracts Awarded, Cont'd.)

econdary Hy. 4B, Lincoln Co., to Stand- Asphalt Paving Co., Chronicle Bldg., ne, **$33,646***4.5 mi. Spokane and Pend** e Counties, **to F. R. Hewitt, 420 22 St.,** ne, **$32,633.** Grand total $220,807. **Bids** CD 7/13—ENR 7/15.

C., **Comox-Cowichan**—Provincial Govt., ment Bldgs., Victoria, bituminous sur- section hy., to Columbia Bitulithic, Granville Island, Vancouver, **$42,936.**

S. **Stellarton**—Sidewalks, Fairmont, Acadia and Claremont Aves., Mackay, Rundle, Bridge and North Foord Sts., abor, **$40,000.**

bec—Dpt. Roads, Quebec City, imprv. mi. Levis Co., to H. J. O'Connell, Ltd., a Cement Bldg., Montreal, **$174,491***** Highway 2, from Beaumont to Lauzon, ion Quarries & Paving Co., Ltd., 48-2 e, Quebec City, **$39,055*****12.7 mi. Lot- Co., to H. J. O'Connell, Ltd., Canada nt Bldg., Montreal, **$162,494.** Grand to- 76,040. CD 7/7.

ARTHWORK, WATERWAYS

OSED WORK

., **Van Buren**—Seawall to protect town Arkansas River floods.

isiana — The Amerada Petroleum Co., n Bldg., Tulsa, Okla., dredging channel lip to 4.3 ft. and 6.8 ft. depths below low water level overbottom widths of 170 ft. and install drilling and boiler s in proposed **slip. St. Martin Parish.**

J., **Camden—Atwater Kent, Jr., Corin-** Yacht Club, **boat basin, Delaware Ave.** Kaighn's Point. $150,000. **(Correction-**). CD 7/28 under BA.

ASKED

Bids Asked August 12

abama—U. S. Eng., Grant St. W. of West- St., Mobile, **facilities,** Inv. 569-44-27, n Co.

BIDDERS

., **Gravelly Point**—Pub. Bldgs. Admin., d F Sts. N.W., Wash., 25, D. C., July taining **wall at Washington Natl. Air-** from **F. L. Daniels & Co., Arlington,** 7. CD 7/26.

RACTS AWARDED

kansas—U. S. Eng., West Memphis, ap- 930,000 cu. yd. **earthwork in White River** Dist., **No. 1092-44-1, Phillips Co., to** ry-Hogan 115 N. Spring St., Little Rock, **$500,000;** approx. 1,085,000 cu. yd. earth- in White River Levee Dist., to Hooper r. Co., 1125 Kings Ave., South Jackson- Fla., under **$500,000.**

lorado—U. S. Eng., **909-17 St., Denver,** excav., grading, backfill for structures tilities, Contr. 1728-Eng-357, Denver Co., M. Kenney, 56 Steele St., Denver, un- 50,000.

n., Bolton-Vernon—State, Fred. R. Zel- comptroller, State **Capitol,** Hartford, g. imprv. Upper and Lower Dams, to er Oak Constr. Co., Inc., 525 Main St., ord, **$29,906.** CD 7/20—ENR 7/22.

orida—U. S. Eng., 575 **Riverside Ave.,** onville, Zone 2, **water distr. and water** lines, vitr. **clay or concrete sewer pipe,** re sewer line, etc., Contr. 436-Eng-10365, Co., to Boyd & Goforth, 1226 W. For- St., Jacksonville, **under $50,000.**

orida—U. S. Eng., 575 **Riverside Ave.,** onville, Zone 2, **excav., backfill, install** underground **storage tanks,** etc., Contr. ng-10443, Hermando Co., to Ryan Constr. tovall Office Bldg., **Tampa, under $50,000.**

nois—U. S. Eng., 816 U. S. Courthouse stomhouse, St. Louis, 2, Mo., repairing in Fayette Co., 137,000 cu.yd. earth uilding **levees, Neg.** 1103-44-6, to Stern- Dredging Co., Arcade Bldg., 806 Olive t. Louis, **1, Mo.** Est. **$50,000-$100,000.** 7/21. **CD 7/16.**

egon—U. S. **Eng., Pittock Blk., Portland,** el imprvs. 2.5 mi. **Long Tom River,** wid- and **elimination of bends to improve** age of **Fern Ridge reservoir, Lane Co.,** C. Hall Co., **Eugene, $100,000-$500,000.** ded 7/23.

UNCLASSIFIED

OSED WORK

ansas—POWER LINES—**Arkansas Pow-** Light Co., **Pine Bluff, rebuilding, re-** g basic power **lines, Batesville area,** tructing power **lines at Guion.**

, **Springfield — IMPROVEMENTS—City,** rs. Marie M. Smith, city clk., imprvs., g. drainage, **fencing.** CAA. CD 6/9— 6/17.

, **Evansville**—**TRANSMISSION LINES—** ern Ind. **Gas & Elec. Co., new 20,000** unit transmission **lines, $100,000, incl.**

Decorah—AIRPORT—G. A. Baker, , airport. **$25,000.**

Louisiana—GAS PIPELINE—The Sun Oil Co., Beaumont, Tex., installation maintenance 2½-in. gas pipeline to cross **Bayou Plaquemine Brule, across channel section and at a depth of not less than 3 ft. below the bottom on side slope, Acadia Parish.**

Louisiana—TELEPHONE CABLE **PIPE-**LINE—The **Texas** Co., 919 St. Charles **St.,** New Orleans, installation, maintenance 2 **in.** pipeline for telephone cable to cross the Gulf Intracoastal Waterway, **Atchafalyya** River to **Vermilion** River Sect., **St.** Mary Parish.

Louisiana—WHARF—The Chicago **Bridge** & Iron Co., **Morgan City, 420 ft. timber and** timber pile **wharf, 20 ft. wide, with bulkhead** on land side **extending** lengthwise **approx.** parallel **to the mean low water shoreline to** install and **maintain 7 clusters of 5 piles** each, **and dredge to 10 ft. depth below mean** Gulf level **in Bayou Boeuf,** subdivision of Gulf Intracoastal **Waterway, north bank, St.** Mary **Parish.**

†Miss., Bay St. Louis—FACILITIES—Coast Elec. Power Assn., Bay St. Louis, addnl. facilities. $25,000 REA allot.

Mont., Livingston—IMPROVEMENTS—**City,** imprvs. **$75,000.**

†Nebraska—IMPROVEMENTS—U. S. Eng., 1709 Jackson St., Omaha, imprvs., bldg., Dawes Co., **under $50,000.**

New York—RUNWAY PAVING, etc.—Dpt. Marine & Aviation, Pier A, North River, New York, paving runways 1, 5 and 7, miscellaneous work, Contr. 2389, Idlewild Airport. $2,700,000. J. Downer, 30 Rockefeller Plaza, New York, engr.

New York—GAS DEVELOPMENT—C. B. Fralich, et al, Hooker-Fulton **Bldg., Bradford, Pa.,** extensive **Oriskany** sand **natural gas** development **near Belfast, incl. drilling 1 or more 5,000 ft. wells, connecting lines, etc. $40,000-$50,000.**

†New York—FACILITIES—U. S. Eng., Niagara **Bldg., Niagara** Falls, addnl. facilities, Niagara Co.

N. Y., Schenectady—IMPROVEMENTS—Bd. Supervs. Schenectady Co., Court House, imprvs., addnl. **facilities.** $50,000. **Applied for FWA** funds. Oswald V. Karas, Medical Arts Bldg., archt.

Texas—OIL WELLS—Gulf Oil Corp., **Petroleum Bldg., Houston,** drilling, **developing 6 new oil wells, Jefferson and Chambers Counties.** Over $25,000.

Texas—OIL WELL—Pan-American **Production Co., Texas City,** drilling, developing **new** 8,200 **ft.** oil **well test, Willacy Co.**

Texas—OIL WELL—Texas Co., 1700 San Jacinto St., Houston, drilling, developing **oil** well, Fannett **field area, Jefferson Co.**

Tex., Bledsoe—OIL WELL—Sunray Oil Co., Fair Bldg., Fort Worth, **drilling, casing, developing new 5,500 ft. oil well test.**

Tex., Ft. Stockton—OIL WELL—Bryce McCandless, Ft. Stockton, drilling, developing 5,500 **ft.** oil **well, 25 mi. north of here, Pecos** Co.

†Tex., Fort Stockton—OIL WELL—B. McCandless & Associates, San Angelo, **drilling, developing 5,500 ft. oil well test. $25,000.**

Tex., Gainesville—OIL WELL—Sinclair-Prairie Oil Co., **Gulf Bldg., Houston, drilling, developing 5,700 ft. oil well.**

Tex., Ganado—OIL WELL—Pure Oil Co., Fair Bldg., Fort Worth, **drilling, developing** deep test **oil well.**

Tex., Hondo—OIL WELLS—**F.** M. **Brown,** Hondo, **drilling, developing oil wells. Over** $25,000.

Tex., Louise—OIL WELL—Jno. B. Coffee, State National Bank Bldg., Houston, **drilling, developing 6,500** ft. **oil** well.

Tex., McCook—OIL WELL—Seaboard Oil Co., Commerce Bldg., **Houston, drilling, developing 7,500 ft.** oil **well test.**

Tex., Menard — OIL WELL — **B. A. Duffy,** Abilene, drilling, developing **4,000 ft. oil well.** $25,000.

Tex., Merkel—OIL WELL—Grapeland **Oil** Co., c/o E. Hall & Assoc., Abilene, **drilling 3,500 ft.** oil well.

Tex., Mission—OIL WELL—**Arkansas Fuel** Oil Co., et al, Esperson Bldg., Houston, **drilling,** casing, **developing** 6,500 **ft. oil well.**

Tex., Mission—OIL WELL, etc.—Texas Co., 1700 San Jacinto St., **Houston, drilling, casing** developing new 7,500 ft. oil **well test, providing** earthern pits for oil.

Tex., Montalba—OIL WELL—Roeser & Pendleton, Palestine, drilling, **casing, developing** new deep test oil well.

Tex., Myersville — OIL WELL — Northern Ordnance Corp., Yorktown, drilling, casing, developing new 10,000 ft. oil well.

Tex., Orla—OIL WELL—**Standard Oil Co.** of Texas, Petroleum Bldg., **Houston, drilling,** developing deep test oil well.

Tex., Richmond—IMPROVEMENTS—Eastern Airlines, Municipal Airport, Houston, **and** Richmond, imprvs., est. $25,000. CAA.

Tex., Rio Grande—OIL WELL—Fidelity Oil & Royalty Co., et al, Esperson Bldg., Houston, drilling, developing deep test oil well.

Tex., Sheffield—OIL WELL—Ben Banner, 2345 Lofton Terrace, Ft. Worth, drilling, casing, developing new 2,200 ft. cable-tool oil well.

Tex., Wichita Falls—OIL WELL—Continental Oil Co., Eagle Ford Bldg., **Dallas, drilling, casing,** developing new 5,000 **ft.** oil **well test.**

†Washington—FACILITIES—U. S. Eng., **800 3 Ave., Seattle, Zone** 4, addnl. **facilities, Neg. No. 695, Spokane Co.**

Tex., Yorktown—OIL WELL—Adams Oil Co., **drilling, casing, developing** deep **test** oil **well, Dewitt Co.**

†Washington — ELECTRICAL DISTRIBUTION SYSTEM, etc.—U. S. Eng., 800 Third Ave., Seattle, Zone 4, electrical distr. and **flood light sys., Neg. No. 694,** and **patrol catwalks, Neg. No. 701, King Co.**

†Washington—GRADING, etc.—U. S. Eng., 800 Third Ave., Seattle, Zone 4, grading, **clearing, Neg. No. 690, Whatcom** Co.

†Washington — IMPROVEMENTS — U. S. Eng., 800 Third Ave., Seattle, Zone 4, **imprvs., Neg. No.** 702, **Jefferson Co.**

†Washington—LIGHTING SYSTEM—U. S. Eng., 800 Third **Ave.,** Seattle, Zone **4,** lighting sys., Neg. No. 697, Grant Co.

BIDS ASKED

Bids Asked After August 1

Tex., Houston—IMPROVEMENTS—City, J. Edy, mgr., imprvs., permanent type fencing, addnl. asphalt paving outside elec. lighting. Over $25,000.

Bids Asked August 9

N. B., Pennfield Ridge—IMPROVEMENTS—Dpt. Transport, Ottawa, Ont., addnl. development imprvs., hard-surfaced runways and taxi strips. $125,000. Plans deposit $10.

Bids Asked August 10

N. Y., New York—BORINGS—**Dpt. P. Wks., Municipal Bldg., sub-surface** borings.

†North Carolina—IMPROVEMENTS—**Yards & Docks, Navy Dpt., 18 St. and Constitution** Ave. N.W., Wash., **D. C., imprvs., grading,** paving. CD 7/14.

Bids Asked August 12

Sask., Brora — IMPROVEMENTS — Acting **Secy., Dpt. Transport, Ottawa, Ont.,** imprvs., **grading, smoothing, fencing. Plans** deposit **$10.**

Bids Asked August 13

†Tex., El Paso — IMPROVEMENTS — Dpt. **Commerce, Civil Aeronautics Admin., P. O. Box 1689, Fort Worth, imprvs., clearing, grubbing, concrete or asphalt paving, fencing, electric lighting, etc. Plans deposit** $20. **Extended date. CD 7/27—ENR 7/29.**

N. S., North Sydney—WHARF—Secy. Dpt. **P. Wks., Ottawa, Ont., imprv. railway wharf. $100,000-$150,000. Plans deposit $50. CD** 6/2/42—**ENR 6/4/42.**

LOW BIDDERS

★**†Arizona**—IMPROVEMENTS—**U. S. Eng.,** 751 S. Figueroa St., Los Angeles, 14, Calif., July 26, imprvs., No. 115, Cochise Co., from Basich Bros. Constr. Co., 600 S. Fremont Ave., Alhambra, Calif., under **$1,000,000.** CD 7/20.

CONTRACTS AWARDED

†Alabama—UTILITY YARD, etc.—U. S. **Eng., Grant St. west of Westwood St., Mobile, utility yard and temporary frame bldg., Contr. 569-Eng-5248, Tuscaloosa Co., to N. C. Morgan Constr. Co., Tuscaloosa, under $50,000.**

†Arizona—IMPROVEMENTS—U. S. Eng., **751 S. Figueroa St., Los Angeles,** 14, Calif., **imprvs., crash truck shelters, No. 234F,** Pima **Co., to Jas. B. Donaldson, Heard** Bldg., **Phoenix, under $50,000.**

†Arizona—**IMPROVEMENTS**—U. S. Eng., **751 S. Figueroa St., Los Angeler, Zone 14, imprvs., lighting sys., No. 1313,** Pima Co., **to New** State **Electric Co., 214 W. Washington St., Phoenix,** under **$50,000.**

†Arkansas—IMPROVEMENTS—U. S. Eng., **300 Bway., Little Rock, imprvs.,** addnl. **facilities, Arkansas Co., to Mac's** Builders, 204 **Gem Bldg., Little Rock,** under **$50,000.**

†Arkansas—IMPROVEMENTS—U. S. Eng., 300 Bway, Little Rock, imprvs., grading, drainage, Lawrence Co., to D. F. Jones Constr. Co., Insurance Bldg., under $100,000.

†California—CONSTRUCTION—U. S. **Eng., 74 New Montgomery St., San Francisco, addnl. construction,** Contr. **368-Eng-5524, San** Francisco **Co., to Fred J. Early, Jr.,** Co., Inc., 369 **Pine St., San Francisco, under $50,000.**

†California—IMPROVEMENTS—U. S. Eng., 751 **Figueroa St., Los Angeles, Zone 14,** imprvs., portable bldgs. No. 208 C, San Bernardino Co., to Steed Bros., 714 Date Ave., Alhambra, under **$50,000.** Awarded 7/27.

†California—FIRING RANGE—U. S. Eng., 74 New Montgomery St., San Francisco, firing range, No. 838, San Francisco Co., to C. H. Bessett Bdg. Co., 826 Walnut St., Burlingame, awarded 7/30.

†California—IMPROVEMENTS—U. S. Eng., 74 New Montgomery St., San Francisco, constr. imprvs., Spec. 509 Napa Co. to D. McDonald & R. A. Westbrook, 204 23rd St., Sacramento, awarded 7/30.

UNCLASSIFIED Contracts (Cont'd.)

†California—CONSTRUCTION—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, addnl. construction, No. 299C, Kern Co., to Al. Reingardt, 405 Redondo Ave., Long Beach, over **$50,000.** Awarded 7/20.

†California—IMPROVEMENTS—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, imprvs., lighting sys. addn., No. 102, Inyo Co., to Norman Ehlers, 3760 Rosewood Pl., Riverside, under **$50,000.**

†California—IMPROVEMENTS—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, imprvs., concrete sidewalks, No. 197C, San Bernardino Co., to Harvey Adair Constr. Co., 1147 E. Garvey Ave., El Monte, under **$50,000.** Awarded 7/24.

†California—IMPROVEMENTS—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, imprvs., SLOA-2, San Luis Obispo Co., to Frontier Constr. Co., 2034 Orange Dr., Whittier, under **$50,000.**

†California — LIGHTING SYSTEM — U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, imprvs., lighting sys., No. 1376, Los Angeles Co., to Clyde W. Wood, Inc., 816 W. Fifth St., Los Angeles, under **$50,000.** Awarded 7/19.

†California—LOADING RAMPS—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, loading ramps, No. 315 C, Riverside Co., to J. Wilcox, 3370 E. Randolph St., Huntington Park, under **$50,000.** Awarded 7/22.

★**California**—TRAFFIC CONTROL SIGNAL SYSTEM—Western Pacific R. R. Co., T. L. Phillips, ch. engr., 526 Mission St., San Francisco, installing centralized traffic control signal sys. in 118 mi. Feather Canyon stretch of the railroad, Plumas and Butte Counties. Owner builds. **$1,300,000.** CD 7/29.

†California—TRAINING AIDS—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, addnl. training aids, No. 308C, Riverside Co., to Scherer & Pritchard, 3964 Orange St., Riverside, under **$50,000.**

†California—TRAINING AIDS—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, training aids, No. 118, San Diego Co., to J. S. Barrett, 455 Spreckles Bldg., San Diego, over **$100,000.** Awarded 7/23.

†Florida—RIFLE RANGE, etc.—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, rifle range, temporary frame bldgs., Contr. 436-Eng-10400, Dade Co., to W. T. Price Dredging Co., 3200 S.W. 27 St., Miami, under **$50,000.**

†Florida — AIR-CONDITIONING — U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, air-conditioning in bldg., Neg-Jax-44-46 Dade Co., to H. Higgins, 1341 S.W. 8 St., Miami, under **$50,000.** Awarded 7/23.

†Florida — AIR STATION MAGAZINE — Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., magazine construction, Naval Air Stations, NOY 6232, to Wright Contracting Co., Inc., First National Bank Bldg., Columbus, Ga., **$307,369.**

†Florida — CAMOUFLAGING — U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, imprvs., camouflaging, Neg-Jax-43-1042-R, Orange Co., to Modern Painting Co., 316 Palmer Bldg., Atlanta, Ga., under **$50,000.**

†Florida—CLEARING, etc.—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, clearing, grubbing, excav., bituminous surface treatment, Taylor Co., to Marion Contracting Co., Ocala, between **$50,000-$100,000.** Awarded 7/27.

†Florida—ELECTRIC DISTRIBUTION SYSTEM—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, electric distr. sys., Neg-Jax-43-1141, Pinellas Co., to Bigby Electric Co., 305 Franklin St., Tampa, under **$50,000.** Awarded 6/25.

†Florida—FACILITIES—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, addnl. facilities, Neg-Jax-44-56, Sarasota Co., to The Artley Co., 504 E. Bay St., Savannah, Ga., under **$50,000.** Awarded 7/24.

†Florida—GRADING, etc.—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, grading, temporary frame bldgs., steam and air pipe and fittings, sewer and water distr. lines, Contr. 436-Eng-10311, Duval Co., to A. S. Wikstrom, Orlando, under **$50,000.**

†Florida — IMPROVEMENTS—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, imprvs., Neg-Jax-43-1125, Highlands Co., to Stevens & Sipple, 1920 N. Orange Ave., Orlando, under **$50,000.** Awarded 6/24.

†Florida—IMPROVEMENTS—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, imprvs., Neg-Jax-44-31, Polk Co., to Cleary Bros. Constr. Co., Georgia Ave., West Palm Beach, under **$50,000.** Awarded 7/21.

†Florida—IMPROVEMENTS—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, imprvs., Neg-Jax-44-32, Sarasota Co., to Southern States Constr. Co., Miami, under **$50,000.** Awarded 7/20.

†Florida—RANGES—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, ranges, Neg-Jax-44-58, Highlands Co., to Southern States Constr. Co., Miami, under **$50,000.** Awarded 7/22.

†Florida—VENTILATION—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, ventilation, Neg-Jax-43-1124, Pinellas Co., to Paul Smith Constr. Co., 320 Rome Ave., Tampa, under **$50,000.** Awarded 6/28.

†Florida—YARD—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, yard, Neg-Jax-44-48, Hillsborough Co., to Fred Howland, Inc., 1114 Postal Bldg., Miami, under **$50,000.** Awarded 7/23.

★**†Georgia**—IMPROVEMENTS—U. S. Eng., Post Office Bldg., Savannah, imprvs., Dougherty Co., to MacDougald Constr. Co., Northside Dr. N.E., Atlanta, under **$1,000,000.**

†Georgia—FACILITIES—U. S. Eng., Post Office Bldg., Savannah, addnl. facilities, Contr. 819-Eng-1620, Bibb Co., to Smith, Yetter & Griffin, 337 Worth Ave., Palm Beach, Fla., under **$50,000.**

★**†Idaho** — IMPROVEMENTS, CLEARING, etc.—U. S. Eng., 800 3 Ave., Seattle 4, Wash., imprvs., grading, paving, Bear Lake Co., to Morrison-Knudsen Co., Inc., 319 Bway., Inc., Boise, **$500,000-$1,000,000.** CD 4/23/42—ENR 4/30/42.

†Indiana — REMOVING HAZARDS — U. S. Eng., 612 Federal Bldg., Louisville, Ky., removal of hazards, Contr. 559-Eng-7029, Jackson Co., to Birmingham Contr. Co., 208 Hanna Bldg., Birmingham, Mich., under **$50,000.**

†Kansas—IMPROVEMENTS—U. S. Eng., 10 E. 17 St., Kansas City, Mo., imprvs., washrack, Montgomery Co. to J. D. Brewster Const. Co., Independence. Under **$50,000.**

†Kansas—CLEARING, etc.—U. S. Eng., 10 E. 17 St., Kansas City, Mo., clearing, grubbing, grading, paving, etc., Contr. 461-Eng-11999, Ford Co., to The Noel Co., Jamestown, N. D., **$100,000-$500,000.**

†Louisiana—IMPROVEMENTS—U. S. Eng., 300 Broadway, Little Rock, Ark., imprvs., Ouachita Parish, to Dixie Constr. Co., Shreveport, under **$50,000.**

†Maine — GASOLINE DISTRIBUTION — U. S. Eng., 31 St. James Ave., Boston, Mass., gasoline distr. sys., No. 175-44-NEG 4, Aroostook Co., to Ley Constr. Co., 1215 Main St., Springfield, Mass., under **$50,000.** Bids 7/14. CD 7/9.

†Massachusetts — NIGHT LIGHTING SYSTEM—U. S. Eng., 819 Industrial Trust Bldg., Providence, R. I., night lighting sys., Contr. 699-Eng-2453, Middlesex Co., to New England Power Serv. Co., 441 Stuart St., Boston, under **$50,000.**

†Mass., East Boston (sta. Boston)—RAILROAD SPUR TRACK, etc.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave., N.W., Wash., D. C., railroad spur track, coal storage space and paving. East Boston fuel depot, NOY 6280, to Old Colony Crushed Stone Co., Vernon St., Quincy, **$39,395.**

†Massachusetts—OUTLYING FIELD—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., outlying field, NOY 6447, Martha's Vineyard, to John McCourt Co., 910 Huntington Ave., and John P. Condon Corp., Coolidge Hill Rd., both Boston, **$126,437.**

†Mass., East Boston (sta. Boston)—TANK CAR UNLOADING RACK—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., tank car unloading rack, fuel depot, NOY 6291, to J. J. Hurley & Co., 102-104 Bway, Boston, **$138,873.**

†Mass., South Weymouth — FINDER HOUSES—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., direction finder houses, N.A.S., NOY 6658, to R. R. Jacobucci, Inc., 28 Dayton St., Quincy, **$25,650.**

†Michigan — RAILROAD TRACK, etc. — U. S. Eng., 520 Merchandise Mart, Chicago, Ill., constructing railroad track, hardstandings, incl. storm sewer drainage, Contr. 11-032-Eng-502, Calhoun Co. to Miller-Davis Co., Kalamazoo, **$50,000-$100,000.**

†Mich., Dearborn—TANK—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., naval training tank, Naval Training School, NOY/F/20013, to O. W. Burke Co., 1101 Fisher Bldg., Detroit, **$104,957.**

†Missouri—CLEARING, etc.—U. S. Eng., 10 E. 17 St., Kansas City, Mo., clearing, cutting, grading, Contr. 461-Eng-11992, Phelps Co., to F. E. Chalender, Springfield, under **$50,000.**

†Montana—IMPROVEMENTS—U. S. Eng., 800 3 Ave., Seattle 4, Wash., imprvs., water piping, Glacier Co., to Union Constr. Co., Great Falls. Est. under **$50,000.**

†Nebraska—IMPROVEMENTS—U. S. Eng., 1709 Jackson St., Omaha, imprvs., platforms, bathhouses, etc., Lancaster Co., to Wilson Const. Co., David City, under **$50,000.**

†Nebraska—IMPROVEMENTS—U. S. Eng., 1709 Jackson St., Omaha, imprvs., truss repairs, Redwillow Co. to Rentlor Co., Kearney. Under **$50,000.**

†Nebraska—AIR CONDITIONING—U. S. Eng., 1709 Jackson St., Omaha, air conditioning, Thayer Co., to Sidles Co., 19 and Howard Sts., Omaha under **$50,000.**

†Nebraska—FENCES—U. S. Eng., 1709 Jackson St., Omaha, fences, Contr. 643-Eng-4256, Dodge Co., to S. Korshoj, Blair, under **$50,000.**

†Nevada—SEEDING, etc.—U. S. Eng., 2109-8 St., Sacramento, Zone 8, seeding and mulching, Contr. 1105-Eng-5157, Washoe Co., to J. A. Casson Co., Hayward, Calif., under **$40,000.**

★**†New Jersey**—RAILROA S, etc.—Yar Docks, Navy Dpt., 18 St. and Constit Ave. N.W., Wash., D. C., railroads, ba caded sidings and tempor admini bldg., naval air depot, na ammunitio pot, NOY 6765, and barge pier and tr N.A.D., New York area, N Y 6766, to hurst Constr. Co., Inc., 21 West St., York, N. Y., **$3,834,752.** Bids 7/24. CD under CA.

†New Mexico—TARGET— S. Eng querque, target, Contr. 911-Eng-20 Co., to Skousan Bros., Albuquerque, un **$50,000.**

†New York—ANTI-AIRCRAFT TRAIN CENTER—Yards & Docks, Navy Dpt., 1 and Constitution Ave., N.W., Wash., D anti-aircraft training center, NOY 640 Beach, to Chapman-Kruge Engineering 155 E. 42 St., New York, $163,121. Bids CD 7/2.

†New York—CONSTRUCTION, etc.—U Eng., 120 Wall St., New York, miscellan construction, gasoline fueling sys., Contr. 1 Eng-4165, Suffolk Co., to R. T. Frye & Co., I 623 Tenth Ave., New York, under $50,000.

†New York—GASOLINE FUELING SYST —U. S. Eng., 120 Wall St., New York, gaso fueling sys., Contr. 1097-Eng-4049, Nassau to R. T. Frye & Co., Inc., 623 Tenth A New York, under **$50,000.**

†New York—GRADING, etc.—Yards Docks, Navy Dpt., 18 St. and Constitu Ave. N.W., Wash., D. C., grading, drain seeding, Naval Training Sta., Ft. Schuy NOY 6340, to Garofano Const. Co. Inc., 1 Prospect Ave., Mt. Vernon, **$36,000.**

†New York—STORAGE AREA—U. S. E 120 Wall St., New York, Zone 5, storage a Contr. 1097, Eng-4176, Suffolk Co., to St Asphalt Paving Co., 41 Park Row, New Y under **$50,000.**

†North Carolina—RANGE FACILITIES S. Eng., 308 Customhouse, Wilmington, range facilities, Contr. 982-Eng-1897, W Co., to F. D. Cline, Fairview Rd., Rale under **$50,000.**

†Ohio—RESEARCH BUILDING—Nat Advisory Committee for Aeronautics, Cl land Airport, Cleveland, 1 story, 68x24 brick, rein.-con. research equipment to Hadlock Krill Co., 2169 E. 33 St., Clevel Est. **$150,000.** Bids 7/28. CD 7/14—ENR

★**†Oklahoma**—APRON EXTENSIONS— Eng., 416 Wright Bldg., Tulsa, 2 a extens., Contr. 957-Eng-2037, Oklahoma to Western Contr. Corp., 2100 E. 4 St. S City, Ia., **$500,000-$1,000,000.**

†Oklahoma—FACILITIES—U. S. Eng Main St., Denison, Tex., facilities, Contr. Eng-2412, Carter Co., to J. T. Chapma Sons, Sulphur, under **$50,000.**

†Oklahoma—FACILITIES—U. S. Eng Wright Bldg., Tulsa, Zone 2, addnl. facil Contr. 957-Eng-2025, Oklahoma Co., to W Price Constr. Co., 605½ W. Main St., Nicholson & Cramer, Inc., and O. L. Bo ton, Hightower Bldg., all Oklahoma **$50,000-$100,000.**

†Oklahoma—HEATING, etc.—U. S. 416 Wright Bldg., Tulsa, heating, ventila humidifying and filtering sys., ceiling, lining and fan rooms, Contr. 957-Eng- Oklahoma Co., to The R. C. Mahon Co., Mt. Eliot St., Detroit, Mich., **$100,000-$500**

Pa., Slippery Rock—GAS DEVELOPME Manufacturers Light & Heat Co., Union Bldg., Pittsburgh, extensive deep-sand na gas development, incl. drilling, unspec number 7,000 ft. wells, connecting and ga ing pipelines, booster stations, etc., own fo Est. over **$50,000.** CD 7/8—ENR 7/15.

†South Carolina—APRONS—U. S. Eng Customhouse, Charleston, aprons, Contr. Eng-1545, Greenville Co., to Ballenger Pa Co., Greenville, **$100,000-$500,000.**

†South Dakota—MULCHING, etc.—U Eng., Administration Bldg., Fort Peck, M mulching and dust control, watering, C 631-Eng-2848, Pennington Co. to McMa Co., Rapid City, under **$50,000.**

†South Dakota—RIFLE RANGE, etc.—U Eng., 1709 Jackson St., Omaha, Neb., skeet and pistol ranges, Contr. 643-Eng- Codington Co., to C. Swedberg, Whea Minn., under **$50,000.**

★**†Texas**—APRONS, etc.—U. S. Eng., Wright Bldg., Tulsa, Okla., aprons, ru exten., taxiways and application of dust liative, Contr. 957-Eng-1992, Dallam Co., t F. Dow Co., Inc., 424 N. Bowling Green W W., Los Angeles, Calif., **$500,000-$1,000,000.**

†Texas—FACILITIES CONVERSION—U Eng., 231 W. Main St., Denison, conversion facilities, Contr. 257-Eng-2422, Wichita Co., Hair, Christie & Mason, Wichita Falls, un **$50,000.**

†Texas — HAZARD ELIMINATION — U. Eng., 231 W. Main St., Denison, eliminat of hazards, Contr. 257-Eng-2421, Cooke to L. J. Miles Constr. Co., Roaring Springs R Fort Worth, under **$50,000.**

†Texas—IMPROVEMENTS—U. S. Eng., F Sam Houston, imprvs., addnl. lighting, e Bexar Co., to Briggs & Killian, Sunset R San Antonio, under **$50,000.**

Texas—OIL WELL—Henne-Einch, et Zapata, drilling, developing new 3,100 ft. well test, Zapata Co., to Wise Drilling C Laredo. Est. **$25,000.**

CLASSIFIED (Contracts Awarded, Cont'd.)

ex., Clarksville — OIL WELL — Clarence cker, Clarksville, drilling, developing oil ll, to Earl Lohn Co., Gainesville, approx. ,000.

ex., Grand Prairie—ELECTRICAL POWER exas Electric Service Co., Grand Prairie, side 12,000 volt electric power transmission force account. Approx. **$40,000.**

ex., San Antonio—OIL WELL—W .T. Montnery & Assoc., Castroville Rd., drilling, deoping new oil well, 13 mi. west of here, to Cravens & Sons, 501 Hays St. Approx. ,000. CD 7/22.

Washington—CONSTRUCTION—U. S. Eng., 3 Ave., Seattle, Zone 4, addnl. construc, installation, King Co., to MacRae Bros., 4 Ave. S., Seattle, under **$50,000.**

Washington—CLEARING, etc.—U. S. Eng., Third Ave., Seattle, Zone 4, clearing, grad, Watcom Co., to A. Osberg, 502 N. 62 St., ttle, Zone 3, **$100,000-$500,000.**

Washington—CONSTRUCTION, etc.—U. S. ., 800 Third Ave., Seattle, Zone 4, addnl. struction, installation, King Co., to Henk Valle Co., 407 Third Ave. W., Seattle, e 99, under **$50,000.**

Washington—ELECTRIC SYSTEM—U. S., ., 800 Third Ave., Seattle, Zone 4, electric , Snohomish Co., to Johnson, Goetz & nnan, 208 E. Pacific St., Seattle, Zone 5, der **$50,000.**

Wyoming — RIFLE RANGE, etc. — U. S. ., 1709 Jackson St., Omaha, Neb., rifle ge, Contr. 643-Eng-4292 and surfacing. tr. 643-Eng-4296, Natrona Co., to Peter wit Sons' Co. and Big Horn Constr. Co., 4 Omaha Natl. Bank Bldg., Omaha, Neb., h under **$50,000.**

an., Winnipeg — IMPROVEMENTS — Dpt. nsport, Ottawa, Ont., imprvs., stripping ling, etc.. to The Tomlinson Constr. Co. ., 1 Somerset Bldg., about **$40,000.** CD 5—ENR 8/8.

. S., Bedford Basin—WHARF TRESTLE. —Foundation Maritime Ltd., 135 Lower ter St., Halifax, wharf trestle approach and lroad siding. Owner builds. **$100,000.**

Ont., Mountain View (Hamilton)—RUNYS RESURFACING — Dpt. Natl. **Defense** r), Ottawa, resurfacing runways and taxi ps, to H. J. McFarland Const. Co., Ltd., zabeth St., Picton. About **$75,000.**

Ont., Oshawa — IMPROVEMENTS — Dpt. tl. Defense (Air), Ottawa, addnl. imprvs., und services, at E.F.T. School, to Gordon Fuller Const. Co., Ltd., 1580 Mercer St., ndsor, about **$75,000.**

Que., Cartierville—IMPROVEMENTS—Act- Secy. Dpt. Transport, Ottawa, Ont., addnl. prvs., to Raymond McDonell & Co., Ltd., 0 Union Ave., Montreal, **$359,000.** Bids 2. CD 7/8.

PUBLIC BUILDINGS

OPOSED WORK

California—Federal Wks. **Agency,** 2223 lton St., Berkeley, **constr. school in** Pulln and Stege Dist., **L. H. Nishkian,** 155 nsome St., San **Francisco, engr.**

California—U. S. Eng., **74 New Montgomery** , San Francisco, housing, Spec. 965, San ncisco Co.

California—U. S. Eng., 74 New Montnery St., San Francisco, housing, Spec. l, San Francisco Co.

California—U. S. Eng., 74 New Montnery St., San Francisco, recreation bldg., ase and wash rack, Spec. 1022, San Franco Co.

California—U. S. Engr., 74 New Montnery St., San Francisco, constr. bldg. facili, No. 1026, Central California

Calif., Alameda—Home Owners' Loan p., Pacific Bldg., San Francisco, plans by Wynkoop, 821 Market St., San Francisco. verting commercial bldg., at 1336 **Park** into 24 living units, job No. W4B-82. ,000.

Calif., Richmond—Federal Wks. **Agency,** 3 Fulton St., **Berkeley,** constr. **firehouse** n., L. H. **Nishkian, 155 Sansome St., San** ncisco, engr.

Calif., Stockton—Home Owners' Loan Corp., ific Bldg., San Francisco, 100 family unit sing conversion.

Calif., Tracy—Pub. Housing Auth., **NHA**, Market St., San Francisco, **30 dormitories,** if. 4748.

Colo., Cowdrey—Pub. Housing Auth., **NHA.** rks Bldg., 1006 Grand Ave., **Kansas** City, , 24 trailers Colo. 5106; 15 **family dwelling** ts, Colo. 5107.

Colo., Kokomo—Pub. Housing Auth., NHA. rks Bldg., 1006 Grand **Ave., Kansas** City, 15 family **dwelling units,** Colo. 5104; 12 lers, Colo. 5105.

Florida—U. S. **Eng.,** 575 **Riverside Ave.,** ksonville, Zone 2, **Bids soon,** 72 dormitory ., 380 family housing **units, Duval Co.**

Fla., Starke—Pub. Housing Auth., NHA. rgia Savings Bank Bldg., Peachtree and ad Sts., Atlanta, Ga., 72 dormitory units, . 8217, and 380 family dwelling units, **Fla.** 18.

†Ga., Columbus—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta, 80 family dwelling units, Ga. 9162.

†Kentucky—Pub. Housing Auth., NHA, 2073 E. Ninth St., Cleveland, O., dormitory housing units, Ky. 15104.

†Ky., Fort Knox—Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland, O., 220 unit family housing, Ky. 15109.

†Ky., Fort Knox—Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland, O., 216 unit dormitory housing, Ky. 15108.

★**†Louisiana** — Pub. Housing Auth., NHA, 1205 Electrical Bldg., 7 and Taylor Sts., Fort Worth, Tex., housing. $3,500,000.

†Maine—Pub. Housing Auth., NHA, 24 School St., Boston, Mass., plans by A. Harrimap, 415 Congress St.. Portland, 60 unit family housing, Me. 17081. CD 7/27—ENR 7/29.

†Me., Lewiston—City, office of the Mayor, sketches infirmary, Ferry Rd. $80,000. **FWA.**

†Me., Portland—City, J. E. Barlow, mgr., 389 Congress St., plans by J. C. and J. H. Stevens, 187 Middle St., brick fire station, Rosemont St. $50,000. **FWA.**

†Maryland—Home Owners' Loan Corp., 2 Park Ave., New York, N. Y., 35 family unit housing conversion, St. Mary's Co.

†Md., Leonardtown—Bd. Educ. St. Mary's Co. Courthouse, Leonardtown, plans by J. J. Baldwin, 927 15 St. N.W., Wash., D. C., school, Md. 18189, St. Mills, near here.

†Michigan—Pub. Housing Auth., NHA, 2073 E. Ninth St., Cleveland, O., site utilities for housing, Mi. 20202. Britsch & Munger, Nicholas Bldg., Toledo, O., archts. CD 6/30—ENR 7/8.

†Michigan—Pub. Housing Auth., NHA, 2073 E. Ninth St., Cleveland, O., plans by O. Winn, Highland Park, temporary family dwelling units, Mi. 20179.

†Michigan—Pub. Housing Auth., 2073 E. Ninth St., Cleveland, O., temporary family dwelling units, Mi. 20180.

†Michigan—Pub. Housing Auth., NHA, 2073 E. Ninth St., Cleveland, O., temporary family dwelling units, Mi. 20205.

†Michigan—Ppb. Housing Auth., NHA, 2073 E. Ninth St., Cleveland, O., temporary family dwelling units, Mi. 20198.

†Michigan—Pub. Housing Auth., NHA, 2073 E. Ninth St., Cleveland, O., temporary family dwelling units, M. 20195.

†Mich., Flint—Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland, O., 220 unit family housing, Mich-20211.

†Miss., Biloxi—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta, Ga., 100 unit family housing, Miss-2217.

†Neb., Blair—Home Owners' Loan Corp., Woodmen of the World Bldg., Omaha, 62 family unit housing conversion.

†Nev., Reno—Pub. Housing Auth., NHA, 785 Market St., San Francisco, Calif., 60 unit dormitory housing, Nev-26155.

†New Jersey—Pub. Housing Auth., NHA, 270 Bway., New York, 7, N. Y., 200 unit family housing, NJ-28162, at Seabrook Farms.

†N. M., Fort Sumner—Pub. Housing Auth., NHA, 1205 Electric Bldg., Seventh and Taylor Sts., Fort Worth, Tex., 220 family dwelling units, N.M. 29168.

★**†New York**—Municipal Housing Auth., Freeport, housing, for NHA. $750,000.

†N. C., New Bern—Pub. Bldgs. Admin., 18 and F Sts., N.W., Wash., 25, D. C., Craven County health centre, N. C. 31-205. CD 2/9—ENR 2/11.

†Ohio—U. S. Eng., 925 New Federal Bldg., Pittsburgh, Pa., piping for boiler room at bldg., Cuyahoga Co. Wilbur Watson & Associates, 4614 Prospect Ave., Cleveland, engrs.

†O., Newcomerstown—Home Owners' Loan Corp., 209 W. 7 St., Cincinnati, 40 family unit housing conversion.

†Okla., Carbon—Pub. Housing Auth., NHA, 1205 Electric Bldg., Seventh and Taylor Sts., Fort Worth, Tex., 192 family dwelling units, Okla. 34075.

†Okla., McCurtain—Pub. Housing Auth., NHA, 1205 Electric Bldg., Seventh and Taylor Sts., Fort Worth, Tex., 220 family dwelling units, Okla. 34076.

★**†Oregon**—North Umpqua Timber Co., Roseburg, mill. $950,000. Defense Plant Corp. will finance.

†Pennsylvania—U. S. Eng., Carlisle, bldgs., altering existing bldgs., Cumberland Co. $100,000.

†Pa., Hatboro—Federal Works Agency, 101 Park Ave., New York, N. Y., plans by I. Demchick, 220 S. 16 St., and D. Supowitz, 246 S. 15 St., both Phila.. school. CD 7/15—ENR 7/22.

S. C., Chester—F. Powell, mayor, Chester, freezer plant.

†S. C., Charleston—Home Owners' Loan Corp., 114 Marietta St., Atlanta, Ga., 250 family unit housing conversion.

★**Va., Petersburg**—State, hospital, comprising 6 bldgs., probably near here. $600,000. Applied for FWA funds.

BIDS ASKED

Bids Asked in August

†Maine—Pub. Housing Auth., NHA, 24 School St., Boston, Mass., dormitory housing, Me 17078, family dwelling units, Me 17079. Over $150,000. Wadsworth & Boston, 57 Exchange St., Portland, archts. CD 7/19—ENR 7/22.

Bids Asked After August 2

†Pennsylvania—Pub. Housing Auth, NHA, 270 Bway., New York, 7, N. Y., family dwellings, Pa. 36435. Extended date. Plans deposit $50. Wigham & Lee, 315 S. 15 St., Phila., archts. CD 7/21, under BA—ENR 7/8, under PW.

Bids Asked August 10

★**†Conn., Bridgeport**—St. Vincent's Hospital, 2820 Main St., brick, steel, limestone nursing school, pediatric unit and hospital addn., Conn. 6-134. $1,115,000. **FWA.** Extended date. J. Gerald Phelan, 211 State St., archt. CD 7/20—ENR 7/22.

†Maine — Pub. Housing Auth., NHA, 21 School St., Boston, Mass., storm water drainage sys., incl. catch basins, piping, grading, drainage sys., for housing NH 27011 and NH 27012. Plans deposit $50 for first set, $10 each addnl. set. Whitman & Howard, 89 Broad St., Boston, Mass., engrs. CD 7/22.

†Ohio—Pub. Housing Auth., NHA, 2073 E 9 St., Cleveland, 80 unit temporary family dwellings, Ohio 33260. Plans deposit $50 Ralph Carnahan & Associates, Mutual Home Office Bldg., Dayton, archts. Former bids rejected. CD 6/30—ENR 7/8 under LB.

Bids Asked After August 10

†Pennsylvania—Pub. Housing Auth., NHA, 270 Bway., New York, 7, N. Y., crawl spaces, walks and pumps, Pa. 36057. Plans deposit $25. Housing Architects of Beaver County, 119 9 St., Monaca, archts.

†Pennsylvania—Pub. Housing Auth., NHA, 270 Bway., New York, 7, N. Y., commercial facilities, site imprvs., Pa. 36131. Plans deposit $25. Housing Architects of Beaver County, 119 9 St., Monaca, archts.

†Pennsylvania—Pub. Housing Auth., NHA, 270 Bway., New York, 7, N. Y., maintenance bldg. addn., Pa. 36055. Plans deposit $25 Housing Architects of Beaver County, 119 9 St., Monaca, archts.

†Pennsylvania—Pub. Housing Auth., NHA, 270 Bway., New York, 7, N. Y., surface drainage, crawl spaces, for housing, Pa. 36054. Plans deposit $25. Housing Architects of Beaver County, 119 9 St., Monaca, archts.

†Pennsylvania—Pub. Housing Auth., NHA, 270 Bway., New York, 7, N. Y., miscellaneous imprvs., site work, Pa. 36053. Plans deposit $25. Housing Architects of Beaver County, 119 9 St., Monaca, archts.

Bids Asked August 12

†California—Housing Auth. of County of Riverside, 3381 Kentucky Ave., Riverside, 40 dormitory units, Calif. 4729 and 60 family dwelling units, Calif. 4730, for PHA, G Stanley Wilson, 3681 6 St., Riverside, archt. CD 7/21—ENR 7/29.

†Colorado—Pub. Housing Auth., NHA, 1006 Grand Ave., Kansas City, Mo., family dwelling units, Colo. 5102 and dormitory units, Colo. 5103. T. H. Buell & Co., 730-14 St., Denver, engrs.-archts. CD 7/21—ENR 7/29.

†Florida — Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta, Ga., dormitory units, Fla. 8211, family dwelling units, Fla. 8212 and Fla. 8213. Southern Associates, Guaranty Bldg., West Palm Beach, archts. CD 7/20—ENR 7/22.

†Mississippi—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta, Ga., 2 dormitory bldgs. Miss. 22169; family dwellings, Miss. 22170 and Miss. 22172; family dwellings, incl. 2 community bldgs., Miss. 22173. Plans deposit $50. CD 6/23—ENR 7/1 and 7/8.

Bids Asked August 13

†South Carolina—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., bldg. addn.

Bids Asked After August 14

†New York—Pub. Housing Auth., NHA, 270 Bway., New York, Zone 7, family dwellings, NY 30170. Plans deposit $50. Schulz & Gerwig, 33 W. 42 St., New York, archts. CD 7/21—ENR 7/29.

Bids Asked August 15

†Ohio—Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland, community bldg., Ohio 33051. Extended date. Plans deposit $25. E. G. Conrad, Hanna Bldg., Cleveland, archts. CD 7/21—ENR 7/29.

Bids Asked After August 16

†New Jersey—Pub. Housing Auth., NHA, 270 Bway., New York, 7, N. Y., infirmary, N.J.-28024. Plans deposit $10. M. I. Braun, 191 Bway., Long Branch, archt.

Bids Asked August 17

†North Carolina—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta, Ga., commercial facilities bldg.. for housings. NC 31074. Plans deposit $50. Tentative date. CD 5/25.

PUBLIC BLDGS. (Bids Asked, Cont'd.)

Bids Asked After August 17

†New Jersey—Pub. Housing Auth., NHA, 270 Bway., New York, 7, N. Y., community bldg., NJ 28051. Plans deposit $10. Extended date. L. V. Pohlman, 1140 E. Jersey St., Elizabeth, archt. CD 7/23—ENR 7/29.

Bids Asked August 25

★**Ind., Evansville**—Evansville State Hospital, Bd. Trustees, J. H. Hare, supt., rebuilding State Insane Hospital, incl. administration, main patients' and power plant bldgs., brick, stone, rein.-con., structural steel. $2,500,000. Plans deposit $25. McGuire & Shook, 1401 Fletcher Trust Bldg., Indianapolis, archts. Jno. M. Rotz Eng. Co., 804 Merchants Bank Bldg., Indianapolis, mech. engr. CD 7/26—ENR 7/29.

†Michigan—Pub. Housing Auth., NHA, 2073 E. Ninth St., Cleveland, O., temporary family dwelling units, Mi. 20191. Extended date. C. W. Ditchy, 705 Lincoln Bldg., and P. R. Sewall, 2631 Woodward Ave., Detroit, archts. CD 7/21—ENR 7/29.

Bids Asked About August 25

†Kentucky—Pub. Housing Auth., NHA, 2073 E. Ninth St., Cleveland, O., temporary family dwelling units, Ky. 15102. Extended date. Plans deposit $50. Wilson, Bell & Watkins, 145 E. High St., Lexington, archts. CD 7/21.

Bids Asked August 26

†S. C., Beaufort—Federal Works Agency, Pub. Bldgs. Admin., Emergency Operations Units, 18 and F Sts. N.W., Wash., 25, D. C., hospital bldgs., H. S. Singley, 1508 Washington Ave., Columbia, S. C., archt. Extended date. CD 6/22—ENR 6/24.

Bids Asked Before August 27

★**†S. C., Charleston**—Medical Society of South Carolina, Charleston, hospital addn., SC 38-139. $800,000. **FWA.** Bids 7/14 rejected. Samuel Hannaford & Son, Dixie Terminal Bldg., Cincinnati, O., archts. CD 7/16—ENR 7/22 under LB.

Bids Asked August 28

†Washington—Vancouver Housing Auth., Kirch Bldg., Vancouver, 3 child service centers and 1 ice house for housing Wash. 45175, 1 child service center for Wash. 45173. for NHA. CD 7/26—ENR 7/29.

Bids Asked September 1

†Kentucky — Pub. Housing Auth., NHA, 2073 E. Ninth St., Cleveland O., dormitory housing. Ky. 15106. Plans deposit $50. Extended date. Wilson Bell & Watkins, 145 E. High St., Lexington, archts. CD 6/16—ENR 6/24.

Bids Asked September 10

†Ind., Columbus—Bd. Hospital Trustees, Olive Murphy, R.N. supt., Bd. Comrs. Bartholomew Comrs., J. R. Albright, aud., Court House, 2 story, bsmnt., brick, stone, rein.-con. county hospital addn., nurses home. $237,000. **FWA.** Plans deposit $25. Bohlen-McGuire & Shook, and Norman-Hill, 1001 Farm Bureau Bldg., Indianapolis, assoc. archts. CD 7/26—ENR 7/29.

Bids Asked September 1¼

†Tenn., Knoxville—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash., D. C., infirmary, acute bldg. and connecting corridors.

Bids Asked About October 1

★**†New York**—American Aviation Corp., P. O. Box, Jamestown, and Graybar Bldg., New York, W. A. Bates, vice-pres., aircraft mfg. plant addns., extens., $950,000. Federally financed. Beckham & Tinkham, Bailey Bldg., Jamestown, archts. CD 7/14—ENR 7/22.

Bids Asked

†Michigan—Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland, O., 35 unit trailer housing, MI 20200. Plans deposit $50. Britsch & Munger, Nicholas Bldg., Toledo, archts. CD 7/22—ENR 7/29.

†Oregon—Pub. Housing Auth., Skinner Bldg., 5 Ave. and Union St., Seattle, Wash., housing, $200,000. H. Perrin, 154 NW Maywood Dr., Portland, archt. CD 7/6—ENR 7/8

†Texas—U. S. Eng., 416 Wright Bldg., Tulsa, Okla., addnl. bldgs., facilities, Sol. 957-Neg-44-21, Dallam Co.

†Texas—U. S. Eng., Fort Sam Houston, bldg., Bexar Co.

LOW BIDDERS

Ala., Mobile—City, Chas. Bauhauer, mayor, July 23, addnl. hospital facilities and remodeling nurses' home, from Rob. I. Cochran, 558 Houston St., **$169,998.** Cooper Van Antwerp, 216½ St. Francis St., Mobile, archt.

†Louisiana—Pub. Housing Auth., NHA, 1205 Electric Bldg., Fort Worth, Tex., July 26, family housing, La. 16091, from Gaylord Shaw & Co., 1115 Hall St., Dallas, Tex., **$193,444.** CD 7/20—**ENR 7/8.**

†Maryland—Pub. Housing Auth., NHA, 19 and D Sts. N.W., Wash., D. C., July 27, roads, surfacing, grading, curbs, gutters, drainage, for housing, MD-28011, from Lee Constr. Co., 10 W. Chase St., Baltimore, **$66,643.**

★**†Nebraska**—Pub. Housing Auth., NHA, Dierks Bldg., 1006 Grand Ave., Kansas City, Mo., July 23, family dwelling units, Neb. 25065 and dormitory units, Neb. 25066, incl. cafeteria and community bldg., from Paul Steenburg Constr. Co., W-1757 First National Bank Bldg., St. Paul, Minn, **$686,650.** CD 6/21—ENR 6/24.

★**†Ohio**—Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland, July 20, housing, Ohio 33252, from Welso Constr. Co., 2233 W. Grand Ave., Chicago, Ill., **$824,945.** CD 6/30—ENR 7/8.

★**†Pennsylvania**—Pub. Housing Auth., NHA, 270 Bway., New York 7, N. Y., July 29, family dwelling units, Pa. 36429, from Fred J. Brotherton, Inc., 185 Atlantic St., Hackensack, N. J., Schedules (A) **$590,729,** (B) **$612,728.** CD 7/14—ENR 7/22.

†Va., Arlington—Arlington Co., July 22, Fairlington School, Va. 44-310, from C. E. Nuckols, 1103 E. Main St., Richmond, **$167,300.** Div. School Bldgs., State Office Bldg., Richmond, archts.

Low Bidders

†Va., Norfolk — At office Federal Works Agency, 601 State Planters Bank Bldg., Richmond, Zone 19, July 26, 7 schools, Va., 44-162, 1 each at Portlock, Westhaven, Coleman Place, Churchland, Norview, Riverdale and Crestwood in Norfolk area, from Kent & Co., Alexandria, **$409,480.** CD 7/13—ENR 7/15.

CONTRACTS AWARDED

†Alabama—U. S Eng., Grant St. west of Westwood St., Mobile, bldgs., Etowah Co., to Dethlefs & Boozer, Anniston, under **$500,000.**

†Alabama—U. S. Eng., Grant St. west of Westwood St., Mobile, bldgs., Montgomery Co., to M. D. Saxon, 210 Coosa St., Montgomery. Est. **$40,000.** Bids 7/16.

★**†Arizona**—City of Phoenix Housing Auth., P. O. Box 3527, Phoenix, dwelling units and community bldg., Ariz. 2318; dormitory and community bldg., Ariz. 2319; temporary dwelling units and community bldg., Ariz. 2321; dormitory, Ariz. 2322; dormitories and community bldg., Ariz. 2323, for NHA, to Eldor R. Morgan & Co., 2300 Huntington Dr., San Mariono, Calif., **$552,200.** CD 7/20—ENR 7/22 under LB.

†California—City of Oakland Housing Auth., 935 Union St., Oakland, electrical contract for 576 dormitory units, Calif. 4694; 144 units, Calif. 4695; 84 units, Calif. 4702, and 276 units, Calif. 4712, for NHA, to Preston A. Jones, 17 Eldridge Court, Berkeley. CD 7/16—ENR 7/22, under CA.

†California—U. S. Eng., 74 New Montgomery St., San Francisco, constr. addn. bldg., No. 1046, San Francisco Co., to DeLuca & Son, 1745 Filbert St., San Francisco, awarded 7/30.

†California—U. S. Eng., 74 New Montgomery St., San Francisco, constr. cold storage bldg., No. 915, San Francisco Co., to Al. J. Hopper, 243 Langton St., San Francisco, awarded 7/30. CD 7/23—ENR 7/29.

†California—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, bldgs., utilities, No. 100, Los Angeles Co., to Geo. B. Thatcher, 4074 Laurel Canyon Blvd., North Hollywood, under **$50,000.**

†California—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, bldg., No. 258C, Riverside Co., to Scherer & Prichard, 3964 Orange St., Riverside, over **$50,000.** Awarded 7/24.

†California—U. S. Eng., 74 New Montgomery St., San Francisco, theatre bldg., grease and wash racks, Job No. 1021, San Francisco Co., to Monk, Reese & Painter, 45 Tait Ave., Los Gatos. Awarded 7/26.

†California—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, temporary frame bldg., Contr. 509-Eng-5227, San Luis Obispo Co., to M. A. Imhoff & Assoc., San Gabriel, **$100,000-$500,000.**

†Calif., El Centro—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., marine women's reserve facilities, NOY 6276, to Brunnel Constr. Co., 14715 La Salle St., Cardena, **$233,682.**

†Calif., Mojave—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., Marine Corps Womens' Reserve Facilities, NOY 6278, to Halper Constr. Co., 739 N. Highland Ave., Los Angeles, **$233,703.**

†Calif., Richmond—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., warehouse rehabilitation, appurtenance, Naval Fuel Depot, Pt. Molate, NOY 6176, to Dinwiddie Constr. Co., Crocker Bldg., San Francisco, **$195,800.**

★**†Conn., Bridgeport**—Bridgeport Hospital, O. H. Bartine, supt., Grant St. and Central Ave., hospital addn., Conn. 6-140, to E. & F. Constr. Co., 94 Wells St., **$553,000. FWA.** Stevens, Curtin, Mason & Riley, 45 Newbury St., Boston, Mass., archts. Bids 7/8. CD 7/13—ENR 7/15.

†Delaware—U. S. Eng., 6 and Walnut Sts., Phila., Pa., temporary frame bldgs., Contr. 697-Eng-4602, New Castle Co., to Wm. Linker Co., Inc., Quartermaster Depot, Phila., Pa., **$100,000-$500,000.** CD 7/2—ENR 7/15.

†Florida—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, bldg. facilities, Neg-Jax-44-35, Dade Co., to Brady Roofing & Tile Co., 3260 N.W. 27 St., Miami, under **$50,000.** Awarded 7/22.

†Florida—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, tent frames, Orange Co., to J. L. Ewell, Lakeland, under **$50,000.** Awarded 7/8.

†Louisiana—U. S. Eng., 300 Bway., Little Rock, Ark., bldg. facilities, Rapides Parish, to Levasseur & Allen, Alexandria, under **$300,000.**

†Louisiana—U. S. Eng., 25 St. and Avenue F, Galveston, Tex., bldgs., Orleans Parish, to Perrilliat-Rickey Constr. Co., Inc., 1539 S. Rendon St., New Orleans, **$100,000-$500,000.** CD 7/14—ENR 7/22.

†Maryland—U S. Eng., 1 and Douglas Sts. N.W., Wash., D. C., temporary frame bldg., Contr. 977-Eng-1809, Montgomery Co., to John McShain, Inc., 17 and Spring Garden Sts., Phila., Pa., **$100,000-$500,000.**

†Massachusetts—General Electric Co., [illegible] Western Ave., Lynn, 1 story, [illegible] ft., brick, concrete research and testing plant, to E. C. Blanchard Co., 940 Broad St., Lynn. Est. **$40,000.** Federally financed.

★**†Michigan**—Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland, O., housing MI 20112, to Kuehne-Simmons Co., P. O. Box 60, River Rouge, **$711,940.** CD 7/20—ENR 7/22.

†Michigan—U. S. Eng., 700 Union Guardian Bldg., Detroit, Zone 31, conversion of warehouse to test bldg., Washtenaw Co., to Gilbert Douglas Co., 439 Penobscot Bldg., Detroit, less than **$1,000,000.**

†Michigan—U. S. Eng., 700 Union Guardian Bldg., Detroit, Zone 31, alterations for dispensary for Army Medical Corps, Wayne Co., to G. J. Lamont, 5315 Seminole St., Detroit, less than **$1,000,000.**

†New Jersey—Bethlehem Steel Co., foot of 14 St., Hoboken, machine shop exten., to Auf Der Heide Aragona, Inc., 5510 Jackson St., West New York, $45,000. Federally financed. Lockwood-Greene, 10 Rockefeller Plaza, New York, N. Y., engrs.-archts.

†New Mexico—Pub. Housing Auth., NHA, 1205 Electric Bldg., Fort Worth, Tex., family housing, NM 29166, to Francis R. Orshea Co., 710 Fisk Bldg., Amarillo, Tex., $409,700. CD 7/27—ENR 7/29.

†New Mexico—U. S. Eng., Albuquerque, temporary frame bldg. addn., Contr. [illegible] Eng.-2078, Curry Co., to Suggs Constr. Co., Big Spring, Tex., under **$50,000.**

†New York—Pub. Housing Auth., NHA, 2 Bway., New York, Zone 7, school and commercial bldg., to Delval Constr. Corp., Harwood Bldg., Scarsdale, $173,590. CD

†New Jersey—Pub. Housing Auth., NHA, 270 Bway., New York, N. Y., site imprvs., N 28111, to F. McInerney, Easton, Pa., $24,5 Bids 6/2. CD 5/27—ENR 6/3.

†North Carolina—U. S. Eng., 308 Customhouse, Wilmington, bldgs., No. 10-982-44, Guilford Co., to W. A. Foster, Burlington, under **$50,000.** Bids July 17.

★**†Ohio**—Pub. Housing Auth., NHA, 2073 9 St., Cleveland, prefabricated, site-erect housing, Ohio 33264, to John A. Johnson Sons, 268 41 St., Brooklyn, N. Y., $596,9 Bids 7/22. CD 7/21—ENR 7/29, under L

†Ohio—U. S. Eng., 925 New Federal Bldg., Pittsburgh, Pa., sprinkler and fire protection sys. for bldg., Cuyahoga Co., to Grinnell Co., Inc., 5203 Hamilton Ave., Cleveland, under **$50,000.** CD 6/3—ENR 6/10.

★**†Oregon**—U. S. Maritime Comm., Dexter Horton Bldg., Seattle, 4, Wash., 3 nurseries for housing projects to Wegman Son, Board of Trade Bldg., Portland. E **$500,000.** CD 5/5—ENR 5/13.

★**†Pennsylvania**—Pub. Housing Auth., NHA, 270 Bway., New York 7, N. Y., housing Pa. 36432, and dormitory housing, Pa. 364 to Delval Constr. Corp., Harwood Bldg., Scarsdale, N. Y., **$626,466.** Bids 7/8. CD 7/13—ENR 7/15, under LB.

†Pennsylvania—U. S. Eng., Standard Bldg., Baltimore, Md., temporary frame bldg. facilities, Contr. 174-Eng. 2181, Monroe Co., Ritter Bros., 1511 N. Cameron St., Harrisbu **$100,000-$500,000.**

†Pa., Phila.—Yards & Docks, Navy Dpt., St. and Constitution Ave. N.W., Wash., D. housing for waves and subsistence bldg., Naval Hospital, NOY 6322, to Frank V. Warren, In 15 and Locust Sts., **$397,168.**

†Texas—U. S. Eng., Fort Sam Houston, addn. shop and materials storage facilities, Val Verde Co., to F. L. Scott & Son, 123 Beal St., San Antonio, under **$50,000.**

★**†Vermont**—Bell Aircraft Corp., 2050 Elmwood Ave., Buffalo, N. Y., alterations and imprvs., factory, incl. revamping, foundations for heavy machines, sewerage sys., to Mahony Troast Const. Co., 657 Main Ave., Passaic, N. J., **$500,000-$1,000,000.** Federally financed.

†Washington—U. S. Eng., 800 Third Ave., Seattle, Zone 4, bldgs., King Co., to A. F. Mowat Constr. Co., 1331 Third Ave. Bldg., Seattle, Zone 1, **$100,000-$500,000.**

★**†Wyoming**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., aluminum plant, to Monolith Portland Midwest Co., 21 W. 7 St., Los Angeles, Calif. Est. approx. **$3,000,000.**

British Columbia—Dpt. Transport, Ottawa, Ont., transmitter bldg., to Marwell Constr. Co., Ltd., 540 Howe St., Vancouver, $96,000.

B. C., Victoria—Dpt. Munitions & Supply, Ottawa, Ont., 1 story, 41x72 ft., rein.-con. repeater bldg. for R.C.A.F., to E. H. Shockley, Admirls Rd.

COMMERCIAL BUILDINGS

OPOSED WORK

alif., Long Beach—E. T. Towar & M. A. nklin, c/o C. Hugh Gibbs, archt., 730 rise Blvd., sixty 5 room frame, stucco llings. Over $150,000.

Calif., San Diego—H. L. Brittain, 4125 Marwick St., Long Beach, 300 single llings near here. Over $500,000.

Cleveland—Fenwick Constr. Co., H. kowitz, 2424 Eaton Rd., seventeen 26x36 dwellings, $10,000 each.

, Cleveland—S. Zehman, 1915 Powell Rd., s by M. P. Halperin, 3759 E. 146 St., Cleve- , 3 story, bsmnt. 25 suite apartment bldg., ,000.

, Garfield Heights—Alex Zaremba and Son, 9603 S. Highland Rd., Cleveland, thirty- n 1 story. 25x29 ft., brick houses, $225,000.

, Garfield Heights—Parma Realty Co., F. Smith, 5672 Ridge Rd., Cleveland, forty- , 1 story bsmnt., 25x29 ft., brick homes, 00 each.

a., Phila.—Sherman & Sherman, 5937 ntz Ave., duplex apartment housing, 67 to Aves., 67 Ave. on west side of Lawrence

ex., Corpus Christi—Rental Homes, Inc., pus Christi, large number 5-6 room dwell- . $150,000.

Wash., Spokane—Carroll, Hillman & Hedlund, Old Times Bldg., Seattle, Zone 1. houses, Cochran St. and Wellesley. 00,000.

S ASKED

ex., Cuero—J. T. Newman & Sons, et al. ro. 50 frame type dwellings, concrete fdns., ities, etc. $200,000.

NTRACTS AWARDED

alif., Fairfield—Leekins & Davis, 1421 96th ., Oakland. 44 residences. Owner builds. r **$150,000.**

alif., Santa Clara—P. J. Pasetta, 2390 Park ., twenty-three 3 bedroom and twenty- 2 bedroom residences. Owner builds. r **$150,000.**

alif., Torrance—Owner, c/o C. Hugh Gibbs. t., 730 Sunrise Blvd., Long Beach, four ory, frame bldgs., to Thrifty Bldg. Serv- 2000 Santa Fe Ave., Long Beach, about **,000.** CD 7/14—ENR 7/22.

onnecticut—Housatonic Heights, Inc., 2740 n St., Stratford, 16 homes, Devon, and 40 es Wildermere Beach. Owner builds. **,200.**

onn., Bridgeport—Roosevelt Apts., Inc., c/o Friedman, 211 State St., 2 story, brick rtment, William St., Owner builds. Over **,000.** CD 6/10—ENR 6/17.

onn., Bristol—Bristol Land Co., Staten nd, N. Y., 29 frame houses, Spellman and Rowe Pl. Owner builds. **$159,500.**

onn., Milford—Spencer Homes, Inc., 95 er St., single, frame houses. Robert Treat Mayflower Parkways. Owner builds. **,000.**

onn., Rivercliff (Milford) — Housatonic ghts, Inc., 2740 Main St., Stratford, 41 e houses. Owner builds. **$169,000.**

., New Orleans—New Urban Realty Co., O. A. Paysse, pres., twenty-eight 2 ily homes, double block bounded by Palm, elitz, Livingston and Cecil Sts., to Loucks Roy, Inc., Lafayette, **$165,000.**

O., Warren—Eastgate, Inc., c/o Wm. H. Heron Co., 300 single and duplex dwellings 4 to 8 family apartments to N. K. Win- Co., 10 W. 48 St., New York, N. Y., **$1,- 000.**

., Chester—J. S. Cornell & Son, 1528 Cherry 40 dwelling. Owner builds, over **$150,000.** R. Neely, Fuller Blsf., archt.

., Chester—Richard R. Neely, Fuller ., Phila., 40 masonry housings. Owner ds. **$150,000.** FHA.

., Phila.—Wm. Kushin, 1420 Walnut St., brick, stone homes, both sides of Ashville extending from Rowland Ave. to Crispin Owner builds. Over **$200,000.**

x., Galveston—Plumb & Mitchell, Inc., Grigge Rd., Houston, fifty-four 1 story llings, facilities, utilities, etc., force- unt. **$150,000.**

Tex., Goose Creek—Tejas Development Co., 150 frame type dwellings, Morrell Addn. 2, force account, **$550,000.** CD —ENR 7/29.

Tex., Houston—Miles Strickland, 2017 W. Gray St., 125 dwellings, facilities, utili- appurtenances, etc., concrete fdns., to te Constr. Co., 1930½ Bissonett St., **,000.** J. Knostman, 2017 W. Gray St., t.

x., Houston—Farm & Home Savings & Assn., Shell Bldg., one hundred two 1 , frame dwellings, utilities, facilities, force account. Approx. **$375,000.** H d, 4605 Montrose Blvd., archt. CD —ENR 7/29.

Tex., Houston—Gulf Port Mortgage Co., 2015 Fourth St., 104 duplex and family unit dwellings, Galena Pk., force account, **$325,000.** CD 6/4—ENR 6/10.

Tex., Houston—Housing, Inc., 5324 Kirby Dr., 100 frame, asbestos siding dwellings, concrete fdns., force account; est. **$375,000,** electrical contract, to West Sharp, 1103 Danube St., approx. **$27,200.** CD 7/28.

INDUSTRIAL BUILDINGS

PROPOSED WORK

Ill., Chicago—FACTORY—H. S. Kaiser Co., 3336 W. Franklin Blvd., plans by Leichenko & Esser, 225 N. Michigan Ave., 1 story, 100x200 ft., brick, wood truss, factory.

Ind., Cambridge City—MACHINE SHOP—Converto Mfg. Co., Chas. Golay, pres., rebuilding three 1 story, 60x125 ft., brick, concrete machine shop bldgs. $80,000, incl. machinery. CD 7/29.

Ind., Indianapolis — FLOUR MILL — Evans Milling Co., rebuilding 4 story flour mill, brick, concrete. $100,000. O. A. Tislow, 818 Architects & Builders Bldg., engr.

Ind., Wabash—FACTORY—Container Corp. of America, 111 W. Washington St., Chicago, Ill., plans by M. S. Carstens, 1 N. La Salle St., Chicago, Ill., brick factory alterations, incl. electric wiring, etc. $40,000.

Kan., McPherson — REFINERY PLANT — National Co-Operative Refinery Assn., McPherson, reconditioning, imprv., recently purchased refinery plant.

Nebr., Omaha—PLANT—Farm Crops Processing Corp., Fourth and Joes Sts., high protein stock food bldg. addn., $515,000.

N. J., Bayonne—PLANT—General Cable Corp., 243 W. 1 St., preparing plans storage and mfg. bldg. for locker and reclaiming use.

N. J., Elizabeth—PLANT—American Munitions Corp., Div. American Type Founders, 200 Elmora Ave., plans by Godfrey Poggi, 287 Morris Ave., interior alterations 4 story, bsmt. mfg. $40,000.

★**O., Massillon**—FACTORY, etc.—Ernest McGeorge & W. R. Hargett, archts., 9400 Quincy Ave., Cleveland, soon lets contract rebuilding aluminum forging mill, 1 bldg., 1,000 ft. long and 3 story office bldg., for Canton Drop Forging & Mfg. Co., C. A. Blauchler, pres., 207 12 St., Canton, $750,000. CD 6/30—ENR 7/8.

Ore., Mowich—PLANING MILL, etc.—Deschutes Lumber Co., Mowich, reconstructing planing mill and lumber shed, destroyed by fire, $50,000.

Pennsylvania—FACTORY—B. F. Goodrich Co., 500 S. Main St., Akron, O., plans by Albert Kahn Assoc. Engr. & Archt., 345 New Center Bldg., Detroit, Mich., factory expansions.

R. I., Pawtucket—PLANT—White Cleaning Co., Jefferson St., plans by Dwight Seabury Co., 186 Main St., 1 story, 95x160 ft. brick, concrete cleaning plant. $42,000.

Wash., Ridgefield—DRY KILN PLANING MILL—Bratlie Bros. Lumber Co., Ridgefield, rebuilding dry kiln planing mill, destroyed by fire. Over $150,000.

Wis., Janesville—FACTORY—Parker Pen Co., 210 Court St., plans by S. L. Reily, 300 W. Adams St., Chicago, Ill., 1 story, 90x380 ft., brick factory addn., rein.-con. fdn., E. A. Krehbiel, 222 W. Adams St., Chicago, Ill., engr.

Wis., Wausau—FACTORY—Marathon Battery Co., 840 Henrietta St., 1 story, 100x100 ft., brick factory addn., concrete fdns.

B. C., Cranbrooke—MILL—Mount Baker Forest Products, Ltd., saw, shingle and planning mills. $40,000.

B. C., Nanaimo—PLANT—Boeing Aircraft of Canada Ltd., 1927 W. George St., Vancouver, plant.

B. C., New Westminister — PLANT — Canadian Pacific Airway Ltd., 615 Howe St., Vancouver, exten. aircraft repair plant, Lulu Island.

B. C., North Vancouver—PLANT—North Vancouver Ship Repairs, Ltd., 171 Esplanade Ave., plant addn. $40,000.

B. C., Vancouver—FOUNDRY, etc.—Seymour Machine Works, Ltd., 864 Seymour St., foundry, machine shop, etc.

Man., Winnipeg—PLANT—Wallingford Press Ltd., 303 Kennedy St., remodeling, exten. plant, $40,000.

Man., Winnipeg—GRAIN ELEVATORS—Canadian Consolidated Grain Co., Ltd., 975 Grain Exchange Bldg., exten., altering grain elevators.

N. S., Liverpool—PLANT—Thompson Bros. Machinery Co. Ltd., Water St., plant exten. $40,000.

Ont., Kenora—PLANT—Ont-Minn Pulp & Paper Co., Ltd., 500 Baker Arcade Bldg., Minneapolis, Minn., plant reconstruction.

Ont., Niagara Falls—PLANT—Lionite Abrasives, Ltd., P. O. Box 3, plant addn. $40,000.

Ont., Niagara Falls—FURNACE, etc.—Canadian Carborundum Co. Ltd., Stanley St., furnace bldg., 2 transformer bldgs., pig breaking bldg. exten. and installing equip. $236,742.

Ont., Orillia—PLANT—Canada Wood Specialty Co. Ltd., 7 N. Front St., plant reconstruction. $40,000.

Ont., Pamour—PLANT—Hoyle Gold Mines, Ltd., 25 W. King St., Toronto, 750 ton gold milling plant.

Ont., Petrolia—PLANT—The Oil Well Supply Co., Ltd., c/o H. B. Branscanbe, 330 Bay St., Toronto, plant for mfg. deep well boring tools, drilling rigs, etc. $40,000.

Ont., Port Arthur—COLD STORAGE PLANT—C. Humby, c/o Bd. Trade, cold storage plant, $40,000.

Ont., Toronto—PLANT—G. Nottingham, c/o Rogers Works Ltd., 361 Oakwood Ave., paint and varnish plant, $50,000.

Ont., Toronto—PLANT—Bakelite Corp. of Canada, Ltd., 163 Dufferin St., 2 story, 40x60 ft., irregular sized, frame, metal clad plant addn. $41,000.

Ont., Waterloo—PUMP HOUSE—J. E. Seagram & Co. Ltd., Waterloo, brick pumphouse, etc.

Ont., Welland—PLANT—Ross Co. Ltd., 14 King St., 2 story, brick plant addn., concrete fdn. $40,000.

Que., Chicoutimi—PLANT—Saquenay Laundry, Ltd., remodeling, exten., plant. $40,000.

Que., Drummondville—FACTORY—Canadian Celanese, Ltd., R. H. Sperling, plant mgr., Drummondville, alterations, installing equip. in plant. $313,000.

Que., Granby—FACTORY—Stark Bros. Ribbon Corp. of Canada, Ltd., 400 Cowie St., factory. $40,000.

Que., Montreal — FOUNDRY — Beaupre Engineering Works, 2101 Bennett St., bronze and aluminum foundry, Clarke St.

Que., Montreal—PLANT—Dominion Rubber Ltd., 550 Papineau Ave., plant remodeling.

Que., Sherbrooke—MILL—Industrial Stampings, Ltd., 184 W. King St., 2 story frame mill, concrete fdn., $40,000.

BIDS ASKED

Bids Asked August 10

Que., Charny — INDUSTRIAL — Canadian Natl. Railways Co., 360 McGill St., Montreal. H. A. Dixon ch. engr. (oper.), two 25x130 ft., frame bldgs. About $40,000.

CONTRACTS AWARDED

Calif., Borden—DEHYDRATION PLANT—R. Mastrofini, Tharsa Dist., Madera, 60-80 ton daily capacity grape dehydration plant. Owner builds, **$60,000.**

Calif., Prattville—DEHYDRATION PLANT—M. H. Vantress, 221 Third St., Marysville, fish meal dehydration plant. Owner builds.

Ill., Chicago—WAREHOUSE—Glidden Co., 1862 N. Laramie St., 1 story, 80x257 ft., brick warehouse, to Enger Bros., 4910 St. Paul Ave. Est. about **$40,000.** N. Ronneberg, 3906 N. Harlem Ave., archt.

Mass., Worcester—PLANT—Coates Clipper & Mfg. Co., 237 Chandler St., 2 story, 50x65 ft., brick, rein.-con. plant addn., to J. B. Lowell, Inc., 173 Grove St. Est. **$40,000.**

N. Y., Jamestown — PLANT — Crawford Furniture Mfg. Co., Allen St. exten., 1 story fireproof plant addn., to Peterson Constr. Co., Bittersweet, RFD, Jamestown. Est. over **$40,000.** CD 7/8—ENR 7/15.

O., Cleveland — FOUNDRY, etc. — Pressure Castings Co., G. Rolls, pres., 21500 St. Clair Ave., 1 story 60x200 ft. and 24x135 ft., brick, steel, foundry and warehouse bldgs., to A. M. Higley Co., 2036 E. 22 St., **$75,000.** Awarded 7/29.

Tex., Houston — STORAGE — Weingarten's Inc., 808 Prairie St., reconstructing foods and storage bldg. incl. electric wiring etc., to Brown Constr. Co., Greenwood St., approx. **$50,000.** Jos. Finger, Inc., National Standard Bldg., archt.

Alta., Exshaw—SILO—Canada Cement Co. Ltd., Canada Cement Bldg., Montreal, Que., 50 ft. diam. silo, to Carter-Halls-Aldinger Ltd., Royal Bank Bldg., Winnipeg, Man. Est. **$65,000.** CD 6/10—ENR 6/17.

B. C., Surrey—STORAGE—, etc.—Fraser Valley Flax Assn., New Westminster, storage, weighting and processing bldgs., for treating flax, to A. Ward & Son, 131 - 11 Ave., New Westminster, **$180,000,** incl. equip.

Man., Portage La Prairie—GRAIN ELEVATOR—Lake of the Woods Milling Co. Ltd., 212 McDermot Ave., Winnipeg, grain elevator to Harper Const. Co. Ltd., 317 Grain Exchange, Winnipeg, approx. **$50,000.** CD 4/30—ENR 5/6.

Ont., Toronto — BOILER ROOM — John Inglis Co. Ltd., 14-24 Strachan Ave., 1 story, 35x44 ft., steel frame, brick, boiler room addn., rein.-con. footings, to A. W. Robertson, Ltd., 57 Bloor St. W., Toronto, **$40,000.** Allward & Gouinlock, 57 Bloor St. W., archts.

Ont., Woodstock—FACTORY—Oxford Tool Ltd., brick factory, concrete fdn., to G. D. Tindall, 313 Light St.

Que., Montreal—PLANT BLDG.—Canadian Car & Foundry Co. Ltd., 621 Craig St. W., 2 story, 43x68 ft., rein.-con., brick, plant bldg. at Turcot Propeller Div., to Foundation Co. of Canada, Ltd., 1538 Sherbrooke St. W., approx. **$45,000.** Spence & Burge, 2063 Union Ave., archts.

For Proposal Advertisements see p. 24

OFFICIAL PROPOSALS

Official notices of bids wanted on construction and related work, equipment and material for government, state, municipal departments and private enterprises

RATE: *The Rate for Official Proposal Advertising is 50 Cents per line (or fraction) per Insertion*

COPY RECEIVED *up to 10:00 A. M. Tuesday for Issue out Thursday Subject to Space Open for Last Minute Ads*

SEND COPY *to Official Proposal Division, Engineering News-Record, 30 W. 42nd St., New York, N. Y.*

OFFICIAL PROPOSALS

Bids: August 18, 1943 (156)

Earthen Dam and Appurtenances Des Moines Water Works, Des Moines, Iowa

Sealed bids will be received by the Board of Water Works Trustees, Des Moines Water Works, up to 10:00 A.M., Wednesday, August 18, 1943, at their office, 1003 Locust St., Des Moines, Iowa, for furnishing certain materials and constructing an earthen dam forming an impounding reservoir. Separate bids will be received upon three parts of the job as follows:

Section A—Earthen dam to contain 575,000 cu. yds. more or less as measured in borrow pits and specified appurtenances.

Section D—Cast iron pipe and fittings f.o.b. cars, Des Moines, Iowa, to be used in the dam and to connect to proposed pumping station.

Section E—Valves f.o.b. cars, Des Moines, Iowa, to be used in connection with the pipe and fittings purchased under Section D.

All of the above work and materials shall be in accordance with plans and specifications on file at the office of the Des Moines Water Works and at the office of the engineers where same may be examined by prospective bidders. One copy of plans and specifications may be secured by application to either of the two undersigned upon payment of three dollars ($3.00) per copy.

Priority number of this job, AA-3.

The right is reserved to reject any or all bids or to waive any informality in any bid.

Board of Water Works Trustees
Des Moines Water Works
Dale L. Maffitt, Gen. Manager
Alvord, Burdick, & Howson, Engineers
1401 Civic Opera Bldg.
Chicago, Illinois.

Bids: August 16, 1943 (162)

Storm Sewer and Drainage Structures

Federal Works Agency Project No. R. I. 37-150
City of Newport, Rhode Island

Separate Sealed Bids for the Paving of Maple Avenue from Girard Avenue, to the Corporate Limits of the City of Newport, Rhode Island including Storm Water Sewer and Storm Drainage Structures, will be received by the Board of Aldermen of the City of Newport at the Office of the City Clerk until three o'clock P. M., Eastern War Time, Monday, August 16, 1943, and then at a Meeting of the Board of Aldermen in the Aldermanic Chambers at Four o'clock P. M., Eastern War Time, of the Same day, publicly Opened and Read Aloud.

The Information for Bidders, Form of Bid, Form of Contract, Plans Specifications, and Forms of Bid Bond and Performance Bond may be examined at the Office of the Commissioner of Public Works, City Hall, Newport, Rhode Island, and Copies thereof obtained upon Payment of $25.00 for each set. Any Bidder, upon returning such Set Promptly and in good condition, will be refunded $20.00. The Board of Aldermen, acting for the City of Newport, reserves the Right to Waive any Informalities in, or to Reject Any or All Bids.

Each Bidder must deposit with his Bid Security in the amount of $700.00 in the Form and subject to the Conditions provided in the Information for Bidders.

Attention of Bidders is particularly called to the requirements as to Conditions of Employment to be observed and Wage Rates to be paid under the Contract.

No Bidder may withdraw his Bid within Forty Five days after the actual date of the Opening thereof.

HENRY B. WHALEN,
City Clerk.

EMPLOYMENT OPPORTUNITIES

RATE: 10 CENTS A WORD, MINIMUM CHARGE $2.00

Positions Wanted (full or part time individual salaried employment only), ½ the above rates, payable in advance.

Box Numbers in care of any of our New York, Chicago or San Francisco offices count 10 words additional in undisplayed ads.

Discount of 10% if one payment is made in advance for four consecutive insertions of undisplayed ads (not including proposals).

Copy for new advertisements received until 10 A. M. Friday for Thursday's issue

POSITIONS VACANT

These Positions Vacant advertisements are published subject to agreement by the advertisers not to consider applicants now employed on war work unless they obtain written release from present employer.

OFFICE ENGINEER — Experienced in Progress, costs Statistics, Analysis, clear concise report, writing for Management Control. Openings available immediately in medium and higher grades. Please give complete work history and references, draft status, and salary desired. P-710, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

WANTED: A junior draftsman, male or female, starting salary $1800 per year. Statement of availability required. Permanent. Newark district. Address P. O. Drawer 629, Newark, New Jersey.

WANTED: A take-off man, familiar with buildings of all types. Starting salary $3,000 per year. Permanent. Newark District. Address P. O. Drawer 629, Newark, New Jersey.

CONTACT MAN familiar with Electrical Construction. Must have acquaintances amongst General Contractors. Large Electrical firm has opportune opening with future. P-752, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

POSITIONS WANTED

CONSTRUCTION GEAR FOREMEN. 25 years of experience all kind excavation Tunnel, Sewers, Deep Foundations, Grading and Concrete. PW-711, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

CONSTRUCTION SUPERINTENDENT. 20 years experience earth removing, tunnels, cassions, concrete, underpining steel oil storage buildings, bridges and equipment, installations. PW-727, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

REINFORCED STEEL GENERAL FOREMAN familiar with field and office practice open for engagement. Recently completed a 14,000 Ton placement. PW-717, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ARCHITECTURAL AND STRUCTURAL ENGINEER. Reinforced Concrete, Steel and Timber Structures. Good draftsman. P. O. Box 303, Jellico, Tenn.

CIVIL ENGINEER graduate; 34 years experience; design and construction; water supply; industrial plants; power plants; hydro-electric developments. PW-758, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

CONTRACTORS ENGINEER, Graduate. 30 years wide experience Expediting, Purchasing, Estimating, Negotiating, Building and General Construction. Salary $100 per week. PW-759, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

CHIEF CLERK or Accountant 25 years experience on Building Construction desires position in Florida. J. R. Fitzpatrick, Roosevelt Hotel, New York City.

PROJECT OR CONSTRUCTION MANAGER or general superintendent. Experience 30 years covering all kinds of structures and types of contracts in both the private and government fields, last three on low cost and defense housing. Location immaterial. PW-764, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

EXECUTIVE INDUSTRIAL BUILDING design, structural and maintenance. 45, graduate, registered. Completing sixty million war plant 1½ years chief designer, 25 years experience factories, layout and design. Available immediately. Present salary six hundred month. Prefer permanent position as maintenance or plant engineer, structural research, steel concrete or timber. PW-761, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

POSITIONS WANTED

PLUMBING SUPERINTENDENT 20 years experience inclusive drainage, fuel, water systems. Layout estimator control purchasing Just completed large S. A. Naval base. Travel draft deferred. PW-753, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

BUILDING CONSTRUCTION EXECUTIVE 25 years experience. Thoroughly understands estimating, subletting, purchasing and office coordination. Age 53, married; Just completed an eleven months assignment; References from last 2 employers. PW-754, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

PLUMBING HEATING Estimator Superintendent, Thirty years experience on all size jobs both Government and private work, very competent in field or office. PW-756, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

PROJECT MANAGER—Construction Engineer. Age 44. 20 years experience in construction field; Heavy Industrials, Foundations, Surveys, Public Works, Housing Projects. Completing work as Project Manager Five Million Dollar War Housing Project September 15. Available thereafter. Will accept work any location. PW-757, Engineering News-Record, 520 N. Michigan Ave., Chicago 11, Ill.

CIVIL ENGINEER, Graduate, 18 years experience design, construction, and writing specifications, subways, buildings, heavy foundations, bulkheads, piers, power plants. Can take charge or work under supervision. Knows Spanish. PW-760, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

SUPERINTENDENT WATER LEVEES and Filtration Plants Pumping Stations. Thirty years experience all type piping competent take off, requisition material lay out. PW-755, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

CONSTRUCTION SUPERINTENDENT or General Foreman. Age 49. College education, 25 years experience on all types Building Construction Highways, Railroads, Cantonments and Bases. PW-763, Engineering News-Record, 520 N. Michigan Ave., Chicago 11, Ill.

ESTIMATOR over 20 years building experience in field and office compiling bids, take offs and pricing, change orders, expediting and cost work. 45 years old—married. PW-726, Engineering News-Record, 520 N. Michigan Ave., Chicago 11, Ill.

STRUCTURAL ENGINEER, 28, M. I. T. graduate, 7 years varied experience in structural design. Now completing responsible design work at large Air Base. Married, one child, present draft status 3B. Prefer responsible position in any phase of structural engineering in Middle Atlantic or New England States. Will travel. Available August 15th. Stanley Levitt, Box 525, New Bern, N. C.

CONTRACTOR'S SUPERINTENDENT-MANAGER, extensive experience in commercial, industrial, and housing construction, available short notice. Well recommended. Anywhere. S or SW preferred. PW-765, Engineering News-Record, 520 N. Michigan Ave., Chicago 11, Ill.

WORK WANTED

EQUIPPED SURVEY PARTIES for all types of surveyor construction work. Any location. Harwood, 258 Broadway, New York City.

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